A

SAFETY DATA SHEET

12293

Section 1. Identification

Product name : ACE® Pure Silicone Lubricant

Product code : 12293

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : Mfd. for:
ACE HARDWARE COPORATION
Oak Brook, IL 60521

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
TOXIC TO REPRODUCTION (Fertility) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 39.6%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging fertility.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.

Section 2. Hazards identification

May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Acetone	35.0	67-64-1
Hexane	23.6	110-54-3
Propane	15.0	74-98-6
2-Methylpentane	10.9	107-83-5
Poly(dimethylsiloxane)	5.0	63148-62-9
3-Methylpentane	4.0	96-14-0
2,3-Dimethylbutane	3.4	79-29-8
Cyclohexane	1.4	110-82-7
2,2-Dimethylbutane	1.2	75-83-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Acetone	**ACGIH TLV (United States, 4/2014).** TWA: 500 ppm 8 hours. TWA: 1188 mg/m³ 8 hours. STEL: 750 ppm 15 minutes. STEL: 1782 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.
Hexane	**ACGIH TLV (United States, 4/2014).** **Absorbed through skin.** TWA: 50 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 50 ppm 10 hours. TWA: 180 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 500 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.
Propane	**NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.
2-Methylpentane	**ACGIH TLV (United States, 4/2014).** TWA: 500 ppm 8 hours. TWA: 1760 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 3500 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 510 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.
3-Methylpentane	**ACGIH TLV (United States, 4/2014).** TWA: 500 ppm 8 hours. TWA: 1760 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 3500 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 510 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.
2,3-Dimethylbutane	**ACGIH TLV (United States, 4/2014).** TWA: 500 ppm 8 hours. TWA: 1760 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 3500 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 510 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.
Cyclohexane	**ACGIH TLV (United States, 4/2014).** TWA: 100 ppm 8 hours.

Section 8. Exposure controls/personal protection

2,2-Dimethylbutane	**NIOSH REL (United States, 10/2013).** TWA: 300 ppm 10 hours. TWA: 1050 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 300 ppm 8 hours. TWA: 1050 mg/m³ 8 hours. **ACGIH TLV (United States, 4/2014).** TWA: 500 ppm 8 hours. TWA: 1760 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 3500 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 510 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid.
Color	: Not available.
Odor	: Not available.
Odor threshold	: Not available.
pH	: 7
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Closed cup: -23°C (-9.4°F) [Pensky-Martens Closed Cup]
Evaporation rate	: 9.1 (butyl acetate = 1)
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Lower: 1% Upper: 12.8%
Vapor pressure	: 13.5 kPa (101.325 mm Hg) [at 20°C]
Vapor density	: 1.55 [Air = 1]
Relative density	: 0.68
Solubility	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (room temperature): <0.205 cm^2/s (<20.5 cSt) Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Aerosol product

Type of aerosol	: Spray
Heat of combustion	: 0.00003629 kJ/g

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame).
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
Cyclohexane	LD50 Oral	Rat	6240 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
Hexane	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
Poly(dimethylsiloxane)	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Hexane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Methylpentane	Category 3	Not applicable.	Respiratory tract

Section 11. Toxicological information

			irritation and Narcotic effects
3-Methylpentane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2,3-Dimethylbutane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Cyclohexane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2,2-Dimethylbutane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Hexane	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
2-Methylpentane	Category 2	Not determined	Not determined
3-Methylpentane	Category 2	Not determined	Not determined
2,3-Dimethylbutane	Category 2	Not determined	Not determined
Cyclohexane	Category 2	Not determined	Not determined
2,2-Dimethylbutane	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Hexane	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
2-Methylpentane	ASPIRATION HAZARD - Category 1
3-Methylpentane	ASPIRATION HAZARD - Category 1
2,3-Dimethylbutane	ASPIRATION HAZARD - Category 1
Cyclohexane	ASPIRATION HAZARD - Category 1
2,2-Dimethylbutane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
Hexane	Acute LC50 2500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Poly(dimethylsiloxane)	Acute LC50 44.5 ppm Fresh water	Daphnia - Daphnia magna - Instar	48 hours
	Acute LC50 3160 µg/l Fresh water	Fish - Ictalurus punctatus	96 hours
Cyclohexane	Acute LC50 4530 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Hexane	-	501.187	high
Cyclohexane	-	167	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** LIMITED QUANTITY	**Special provisions** LIMITED QUANTITY	**Special provisions** (ERG#126)	**Special provisions** LIMITED QUANTITY	**Emergency schedules (EmS)** LIMITED QUANTITY, F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

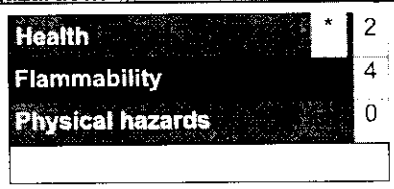
State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetic Acid, 1.0N

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Acetic Acid, 1.0N

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: KEMAA2075-A

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture: Not classified for physical or health hazards under GHS.

Signal word: None

Hazard statements: None

Precautionary statements:
If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not eat, drink or smoke when using this product.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 64-19-7	Acetic Acid	6 %
CAS 7732-18-5	Deionized Water	94 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetic Acid, 1.0N

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration if necessary. If breathing persists give oxygen.

After skin contact:

Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation, discomfort or vomiting persists. Flush with water for 15 minutes.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Immediately get medical assistance if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

Protective equipment: None

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Avoid contact with eyes, skin, and clothing. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Soak with inert material. Use spark-proof tools and explosion-proof equipment. Always obey local regulations. Remove all sources of ignition.

Reference to other sections: None

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetic Acid, 1.0N

SECTION 7: Handling and storage

Precautions for safe handling:

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Wash hands after handling. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly closed. Protect from freezing.

SECTION 8: Exposure controls/personal protection

Control parameters: 64-19-7, Acetic acid, OSHA PEL: 25mg/m3.
64-19-7, Acetic acid, ACGIH TLV: 25mg/m3.

Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection: Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection: Safety glasses with side shields or goggles.

General hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	**Explosion limit lower**: **Explosion limit upper**:	0 Vol % 0 Vol %
Odor:	Vinegar-like	**Vapor pressure at 20°C**:	2.3 kPa (@ 20°C) or 23 hPa (17 mm Hg) at 20 °C (68 °F)
Odor threshold:	Not determined	**Vapor density**:	0.62 (Air = 1)
pH-value:	7 [Neutral] (1% soln/water)	**Relative density**:	1 (Water = 1)
Melting/Freezing point:	0 °C (32 °F)	**Solubilities**:	Completely soluble in water.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetic Acid, 1.0N

Boiling point/Boiling range:	100°C (212°F)	**Partition coefficient (n-octanol/water)**:	Not determined
Flash point (closed cup):	Not applicable	**Auto/Self-ignition temperature**:	Not determined
Evaporation rate:	Not determined	**Decomposition temperature**:	Not determined
Flammability (solid, gaseous):	Not applicable	**Viscosity**:	a. Kinematic: Not determined b. Dynamic: 0.952 mPas at 20 °C (68 °F)
Density at 20°C:	1 g/cm³ (8.345 lbs/gal) at 20 °C (68 °F)		

SECTION 10: Stability and reactivity

Reactivity: None

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions: None

Conditions to avoid:

Store away from oxidizing agents, strong acids or bases.

Incompatible materials:

Strong acids. Strong bases. Metals.

Hazardous decomposition products:

Carbon oxides (CO, CO2). Oxides of carbon and irritation fumes.

SECTION 11: Toxicological information

Acute Toxicity:

Chronic Toxicity: No additional information.

Skin corrosion/irritation: No additional information.

Serious eye damage/irritation: No additional information.

Respiratory or skin sensitization:

: See Section 2.

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

Reproductive Toxicity:

: Experiments have shown reproductive toxicity effects on laboratory animals for acetic acid.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

: Ecotoxicity, Acetic Acid has high biochemical oxygen demand, and a potential to cause oxygen depletion in aquatic systems.

Persistence and degradability:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetic Acid, 1.0N

Readily degradable in the environment.

Bioaccumulative potential: No additional information.

Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Determine whether chemical hazardous or not.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA — Not Regulated.

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: Not Regulated.
Hazard Class: None
Packing Group: Not Regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Not Regulated.
Hazard Class: None
Packing Group: Not Regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetic Acid, 1.0N

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0
HMIS: 1-0-0
GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.

Section 1 Chemical Product and Company Identification

ward's science

5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catherines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**ACETIC ACID, GLACIAL**
Synonyms	Ethanoic Acid / Methanecarboxylic Acid / Glacial Acetic Acid

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS02 / GHS05
Target organs: Respiratory system, Eyes, Skin, Teeth

GHS Classification:
Flammable liquid (Category 3)
Skin corrosion (Category 1A)
Eye damage (Category 1)

GHS Label information: **Hazard statement:**
H226: Flammable liquid and vapour.
H314: Causes severe skin burns and eye damage.

Precautionary statement:
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363: Wash contaminated clothing before reuse.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310: Immediately call a POISON CENTER or doctor.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.
P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Acetic acid	64-19-7	99.8%	200-580-7

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE CORNEAL BURNS. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION AND/OR BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This chemical reacts violently with strong oxidizers, generating a fire and explosion hazard. Reacts violently with strong bases, strong acids and many other compounds.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Acetic acid	TWA: 25 mg/m^3 STEL: 37 mg/m^3	TWA: 25 mg/m^3	TWA: 25 mg/m^3 STEL: 37 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid.
Odor: Strong, acrid, vinegar-like odor.
Odor threshold: Data not available.
pH: <2
Melting / Freezing point: 16.7°C (62°F)
Boiling point: 118.1°C (244°F)
Flash point: 39°C (102.2°F) TCC ASTM D 56

Evaporation rate (Butyl acetate = 1): 0.97
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: 4.0% / 19.9%
Vapor pressure (mm Hg): 11.4 @ 20°C
Vapor density (Air = 1): 2.07
Relative density (Specific gravity): 1.049 @ 20/4°C
Solubility(ies): Soluble in water.

Partition coefficient: Data not available
Auto-ignition temperature: 464°C (869°F)
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: CH_3COOH
Molecular weight: 60.05

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Bases, strong oxidizers, chromic acid, nitric acid, sodium peroxide, carbonates, hydroxides, phosphates. Corrosive to some metals. Potentially violent reaction with acetaldehyde and acetic anhydride. Ignites on contact with potassium-tert-botoxide.

Hazardous decomposition products: Carbon monoxide, hydrogen sulfide and other harmful gases or vapors including oxides and/or other compounds of sulfur and sodium.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 3,310 mg/kg ; Inhalation-rat LC50: 11.4 mg/L/4 hours ; Dermal-rabbit LD50: 1,060 mg/kg
Skin corrosion/irritation: Skin-rabbit - Severe irritant.
Serious eye damage/irritation: Eyes-rabbit - Severe irritant.
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Exposure to vapor may cause irritation of the eyes, nose, and respiratory tract. May cause asthma-like symptoms, including coughing, wheezing, tightness of chest, shortness of breath, and headache.
Ingestion: May cause burns of the mouth, throat, esophagus, and stomach. Signs and symptoms may include pain, nausea, vomiting, diarrhea, dizziness, drowsiness, faintness, weakness, collapse and coma.
Skin: Contact with skin causes pain, redness, burns, and blisters.
Eyes: Contact with eyes may cause redness, pain, corneal burns, and loss of vision.
Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: AF1225000

Section 12 Ecological Information

Toxicity to fish: Gambusia affinis (fish, fresh water), LC50 = 251 mg/L/24 hours
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 95 mg/L/24 hours
Toxicity to algae: Euglena gracilis (Algae), EC100 = 720 mg/L
Persistence and degradability: Easily biodegradable
Bioaccumulative potential: Not expected to bioaccumulate
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN2789
Shipping name: Acetic acid, glacial
Hazard class: 8, (3)
Packing group: II
Reportable Quantity: 5,000 lbs (2270 kg)
Marine pollutant: No
Exceptions: Limited quantity equal to or less than 1 L
2016 ERG Guide # 132

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Acetic acid, glacial	Listed	5,000 lbs (2270 kg)	D001, D002	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: January 22, 2018 **Supercedes:** October 17, 2016

SDS No.: AA0005

SAFETY DATA SHEET

CORROSIVE STORAGE CODE WHITE

Section 1 Chemical Product and Company Identification

Aldon Corporation
221 Rochester Street
Avon, NY 14414
(585) 226-6177

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product	**ACETIC ACID, GLACIAL**
Synonyms	Ethanoic Acid / Methanecarboxylic Acid / Glacial Acetic Acid

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS02 / GHS05
Target organs: Respiratory system, Eyes, Skin, Teeth

GHS Classification:
Flammable liquid (Category 3)
Skin corrosion (Category 1A)
Eye damage (Category 1)

GHS Label information: Hazard statement:
H226: Flammable liquid and vapour.
H314: Causes severe skin burns and eye damage.

Precautionary statement:
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363: Wash contaminated clothing before reuse.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310: Immediately call a POISON CENTER or doctor.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.
P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Acetic acid	64-19-7	99.8%	200-580-7

Section 4 First Aid Measures

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INHALATION: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE CORNEAL BURNS. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION AND/OR BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This chemical reacts violently with strong oxidizers, generating a fire and explosion hazard. Reacts violently with strong bases, strong acids and many other compounds.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

(2012 EMERGENCY RESPONSE GUIDEBOOK, (PHH50-ERG2012), GUIDE # 132)

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Exposure Limits:	Acetic acid	TWA: 25 mg/m^3 STEL: 37 mg/m^3	TWA: 25 mg/m^3	TWA: 25 mg/m^3 STEL: 37 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid.
Odor: Strong, acrid, vinegar-like odor.
Odor threshold: Data not available.
pH: <2
Melting / Freezing point: 16.7°C (62°F)
Boiling point: 118.1°C (244°F)
Flash point: 39°C (102.2°F) TCC ASTM D 56
Evaporation rate (Butyl acetate = 1)**:** 0.97
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: 4.0% / 19.9%
Vapor pressure (mm Hg): 11.4 @ 20°C
Vapor density (Air = 1): 2.07
Relative density (Specific gravity): 1.049 @ 20/4°C
Solubility(ies): Soluble in water.
Partition coefficient: Data not available
Auto-ignition temperature: 464°C (869°F)
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: CH_3COOH
Molecular weight: 60.05

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Bases, strong oxidizers, chromic acid, nitric acid, sodium peroxide, carbonates, hydroxides, phosphates. Corrosive to some metals. Potentially violent reaction with acetaldehyde and acetic anhydride. Ignites on contact with potassium-tert-botoxide.

Hazardous decomposition products: Carbon monoxide, hydrogen sulfide and other harmful gases or vapors including oxides and/or other compounds of sulfur and sodium.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 3,310 mg/kg ; Inhalation-rat LC50: 11.4 mg/L/4 hours ; Dermal-rabbit LD50: 1,060 mg/kg
Skin corrosion/irritation: Skin-rabbit - Severe irritant.
Serious eye damage/irritation: Eyes-rabbit - Severe irritant.
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Exposure to vapor may cause irritation of the eyes, nose, and respiratory tract. May cause asthma-like symptoms, including coughing, wheezing, tightness of chest, shortness of breath, and headache.
Ingestion: May cause burns of the mouth, throat, esophagus, and stomach. Signs and symptoms may include pain, nausea, vomiting, diarrhea, dizziness, drowsiness, faintness, weakness, collapse and coma.
Skin: Contact with skin causes pain, redness, burns, and blisters.
Eyes: Contact with eyes may cause redness, pain, corneal burns, and loss of vision.
Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: AF1225000

Section 12 Ecological Information

Toxicity to fish: Gambusia affinis (fish, fresh water), LC50 = 251 mg/L/24 hours
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 95 mg/L/24 hours
Toxicity to algae: Euglena gracilis (Algae), EC100 = 720 mg/L
Persistence and degradability: Easily biodegradable
Bioaccumulative potential: Not expected to bioaccumulate
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN2789 **Shipping name:** Acetic acid, glacial
Hazard class: 8, (3) **Packing group:** II **Reportable Quantity:** 5,000 lbs (2270 kg) **Marine pollutant:** No
Exceptions: Limited quantity equal to or less than 1 L **2012 ERG Guide #** 132

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL
Acetic acid, glacial	Listed	5,000 lbs (2270 kg)	D001, D002	Listed	Not listed

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: May 13, 2016 **Supercedes:** October 20, 2015

Section 1 Chemical Product and Company Identification

ward's science

5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catherines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**ACETONE**
Synonyms	2-Propanone / Dimethyl Ketone / Solvent

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS02 / GHS07
Target organs: Central nervous system

GHS Classification:
Flammable liquid (Category 2)
Eye irritation (Category 2A)
STOT-SE (Category 3)

GHS Label information: **Hazard statement:**
H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Supplemental information:
Repeated exposure may cause skin dryness or cracking.

Precautionary statement:
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P261: Avoid breathing mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER or doctor if you feel unwell.
P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405+P235: Store locked up. Keep cool.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Acetone	67-64-1	100%	200-662-2

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SEVERE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: REPEATED OR PROLONGED CONTACT MAY CAUSE DRYING AND DEFATTING OF SKIN. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Acetone is extremely flammable and its vapors form explosive mixtures with air. Dangerous when exposed to heat, sparks, flame or oxidizing agents.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Acetone	TWA: 500 ppm; STEL: 750 ppm	TWA: 1000 ppm / 2400 mg/m^3	TWA: 250 ppm / 590 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid.
Odor: Pungent odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: Approximately -95°C (-139°F)
Boiling point: 56°C (133°F)
Flash point: -20°C (-4°F) CC

Evaporation rate (Butyl acetate = 1): 7.7
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: 2.5% / 12.8%
Vapor pressure (mm Hg): 180
Vapor density (Air = 1): 2.00
Relative density (Specific gravity): 0.8
Solubility(ies): Soluble in water.

Partition coefficient: (n-octanol / water): Log Pow: -.24
Auto-ignition temperature: 465°C (869°F)
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: CH_3COCH_3
Molecular weight: 58.08

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Chloroform, chromic anhydride, hydrogen peroxide, nitric compounds, acids, strong oxidizers, alkalies.

Hazardous decomposition products: Oxides of carbon.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 5,800 mg/kg ; Inhalation-rat LC50: 76 mg/L/4 hours
Skin corrosion/irritation: Skin-rabbit - Slight irritant.
Serious eye damage/irritation: Eyes-rabbit - Severe irritant.
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Inhalation may cause cough, sore throat, confusion, headache, dizziness, drowsiness, unconsciousness.
Ingestion: Ingestion causes nausea, vomiting, and other symptoms same as inhalation.
Skin: Contact with skin causes irritation, dry and/or defatting on prolonged contact.
Eyes: Contact with eyes causes redness, pain and blurred vision.
Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: AL3150000

Section 12 Ecological Information

Toxicity to fish: Gambusia affinis (fish, fresh water), LC50 = 13,000 mg/L/48 hours
Toxicity to daphnia and other aquatic invertebrates: Daphnia cucullata (Crustacea), EC50 = ca. 7,635 mg/L/48 hours
Toxicity to algae: Anabaena inaequalis (Algae), EC50 = 21,725 mg/L/14 days
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN1090
Shipping name: Acetone
Hazard class: 3
Packing group: II
Reportable Quantity: 5,000 lbs (2270 kg)
Marine pollutant: No
Exceptions: Limited quantity equal to or less than 1 L
2016 ERG Guide # 127

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Acetone	Listed	5,000 lbs (2270 kg)	U002	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: September 20, 2018 **Supercedes:** January 23, 2018

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 7.00
Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Acetone

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

Hazard class: Specific target organ toxicity, single exposure; Narcotic effects (Category 3). May cause drowsiness or dizziness (H336). Avoid breathing mist, vapors or spray (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Acetone	67-64-1	CH_3COCH_3	58.08	
Synonyms: Dimethyl ketone, 2-Propanone				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Class 1B flammable liquid.
A dangerous fire hazard from heat, flame or strong oxidizers.
Flash point: -17 °C (CC) Flammable limits: Upper 12.8% Lower 2.6% Autoignition temperature: 465 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE
H-1
F-3
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #4. Store with ethers, ketones, halogenated hydrocarbons and ethylene oxide. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can.
Keep container tightly closed (P233). Keep cool (P235). Use only in a hood or well-ventilated area (P271). Take precautionary measures against static discharge (P243).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Use latex, not nitrile gloves. Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: PEL 1000 ppm (OSHA); TLV 500 ppm, STEL 750 ppm (ACGIH); IDLH 2500 ppm (NIOSH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Sweet pungent odor like nail polish remover.
Soluble: Miscible with water, alcohol and many other organic solvents.

Boiling point: 56.5 °C
Density: 0.79
Melting point: -94.6 °C
Vapor density: 2.00

SECTION 10 — STABILITY AND REACTIVITY

Stable. Potentially explosive reaction with strong oxidizing agents and halogenated compounds.
Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye and respiratory tract irritant, dizziness, CNS depression.
Chronic effects: Dermatitis.
Target organs: Liver, kidneys, CNS, respiratory system.

ORL-RAT LD_{50}: 5800 mg/kg
IHL-RAT LC_{50}: 50,100 mg/m^3/8H
SKN-RBT LD_{50}: 20 mL/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #18a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Acetone. Hazard class: 3, Flammable Liquid. UN number: UN1090.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-662-2), RCRA code U002

SECTION 16 — OTHER INFORMATION

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

SAFETY DATA SHEET

Product Number 840

Issuing Date No data available **Revision Date** 03-11-2015 **Revision Number** 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Acetone**

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Multi-purpose solvent

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Sunnyside Corporation
Supplier Address 225 Carpenter Avenue
Wheeling
IL
60090
US
Supplier Phone Number Phone:8003238611
Fax:8475419043

Supplier Email sscontact@sunnysidecorp.com
Emergency telephone number Chem Trec 8004249300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal word Danger

Hazard Statements
Causes serious eye irritation
May cause drowsiness or dizziness
Highly flammable liquid and vapor

Appearance Clear **Physical State** Liquid **Odor** Pungent

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ ventilating/ lighting/ equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection
Keep cool

Precautionary Statements - Response

Skin
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Fire
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity
0% of the mixture consists of ingredient(s) of unknown toxicity

Other information

May be harmful if inhaled
PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION

Interactions with Other Chemicals
Use of alcoholic beverages may enhance toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
Acetone	67-64-1	60 - 100	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

Skin Contact In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen.

Ingestion Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning sensation. Drowsiness. Dizziness.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Unsuitable Extinguishing Media
CAUTION: All these products have a very low flash point. Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
Vapors can form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard.

Uniform Fire Code	Flammable Liquid: I-B Irritant: Liquid

Hazardous Combustion Products
Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact	No.
Sensitivity to Static Discharge	Yes.

Protective equipment and precautions for firefighters
Move containers from fire area if you can do it without risk.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk.
Other Information	Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Environmental Precautions

Environmental Precautions	Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for Containment	A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Methods for cleaning up	Use clean non-sparking tools to collect absorbed material. Soak up with inert absorbent material. Dike far ahead of liquid spill for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions.

Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers.

Incompatible Products

None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetone 67-64-1	STEL = 750 ppm TWA: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m³ (vacated) TWA: 1800 mg/m³ (vacated) TWA: 750 ppm (vacated) STEL: 1000 ppm (vacated) STEL: 2400 mg/m³	IDLH: 2500 ppm 10% LEL TWA: 250 ppm TWA: 590 mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Tight sealing safety goggles.

Skin and Body Protection

Long sleeved clothing. Chemical resistant apron. Impervious gloves. Antistatic boots.

Respiratory Protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Liquid		
Appearance	Clear	**Odor**	Pungent
Color	Colorless	**Odor Threshold**	No information available

Property	Values	Remarks/ Method
pH	N/A	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	56 °C / 133 °F	None known
Flash Point	-18 C / 0 F	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	N/A	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	2.5% @ 77 °F	
Vapor pressure	213 mmHg @ 75 °F	None known
Vapor density	No data available No	None known
Specific Gravity	data available	None known
Water Solubility	Soluble in water No	None known
Solubility in other solvents	data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	869 °F	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	Exempt
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
Caustics, amines, alkanolamines, ammonia, strong oxidizing agents and chlorinated compounds.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause drownsiness and dizziness based on components. May cause irritation of respiratory tract.

Eye Contact Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. May cause redness, itching, and pain. May cause temporary eye irritation.

Skin Contact Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Acetone 67-64-1	-	-	= 50100 mg/m³ (Rat) 8 h

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Mutagenic Effects	No information available.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Chronic Toxicity	No known effect based on information supplied.
Target Organ Effects	Eyes. Central Nervous System (CNS). Respiratory system. Skin.
Aspiration Hazard	No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (inhalation-dust/mist)
100.20 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

Persistence and Degradability
No information available.

Bioaccumulation
No information available

Chemical Name	Log Pow
Acetone 67-64-1	-0.24

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

US EPA Waste Number D001 U002

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Acetone 67-64-1				U002

California Hazardous Waste Codes 212

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Acetone 67-64-1	Ignitable

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name CONSUMER COMMODITY
Hazard Class ORM-D
Description CONSUMER COMMODITY, ORM-D
Emergency Response Guide Number 127

TDG

UN-No. UN1090
Proper Shipping Name ACETONE
Hazard Class 3
Packing Group II
Description UN1090, ACETONE, 3, II

MEX

UN-No. UN1090
Proper Shipping Name ACETONE
Hazard Class 3
Packing Group II
Description UN1090 ACETONE, 3, II

ICAO

UN-No. UN1090
Proper Shipping Name ACETONE
Hazard Class 3
Packing Group II
Description UN1090, ACETONE, 3, II

IATA

UN-No. UN1090
Proper Shipping Name ACETONE
Hazard Class 3

Packing Group	II
Description	UN1090, ACETONE, 3, II

IMDG/IMO

UN-No.	UN1090
Proper Shipping Name	ACETONE
Hazard Class	3
Packing Group	II
EmS No.	F-E, S-D
Description	UN1090, ACETONE, 3, II, FP -18C

RID

UN-No.	UN1090
Proper Shipping Name	ACETONE
Hazard Class	3
Packing Group	II
Classification code	F1
Description	UN1090 ACETONE, 3, II

ADR

UN-No.	UN1090
Proper Shipping Name	ACETONE
Hazard Class	3
Packing Group	II
Classification code	F1
Description	UN1090 ACETONE, 3, II

ADN

UN-No.	UN1090
Proper Shipping Name	ACETONE
Hazard Class	3
Packing Group	II
Classification code	F1
Description	UN1090 ACETONE, 3, II
Hazard Labels	3
Limited Quantity	1 L
Ventilation	VE01

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Acetone 67-64-1	5000 lb		RQ= 2270 kg final RQ RQ= 5000 lb final RQ

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Acetone 67-64-1	X	X	X	X	

International Regulations

Mexico
National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Acetone 67-64-1 (60 - 100)		Mexico: TWA= 1000 ppm Mexico: TWA= 2400 mg/m³ Mexico: STEL= 1260 ppm Mexico: STEL= 3000 mg/m³

Mexico - Occupational Exposure Limits - Carcinogens

Canada
WHMIS Hazard Class
B2 - Flammable liquid
D2B - Toxic materials

16. OTHER INFORMATION

NFPA	**Health Hazards** 2	**Flammability** 3	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	Health Hazards 2	Flammability 3	Physical Hazard 0	Personal Protection X

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
Revision Date	15-Sep-2014
Revision Note	No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

Safety Data Sheet

Acetone

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name:	Acetone
Recommended Use:	Science education applications
Synonyms:	Dimethyl Ketone; , Ketone Propane; , 2-Propanone
Distributor:	Carolina Biological Supply Company 2700 York Road, Burlington, NC 27215 1-800-227-1150
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec:	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER

Highly flammable liquid and vapor. Causes serious eye irritation. Toxic to aquatic life.

GHS Classification:
Flammable Liquid Category 2, Serious Eye Damage/Eye Irritation Category 2, Hazardous to the aquatic environment - Acute Category 2

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Acetone	67-64-1	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation:	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact:	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Ingestion:	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media:	Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection:	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards:	Vapors may travel back to ignition source. Closed Containers exposed to heat may explode.
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area.

Section 7 Handling and Storage

Handling: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/…/ equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Storage: Keep container tightly closed. Store in a well-ventilated place. Keep cool. Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Red - Flammables. Store in approved flammable containers. Store away from oxidizing materials.

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Acetone	500 ppm TWA	750 ppm STEL	1000 ppm TWA; 2400 mg/m3 TWA	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: No information available

Section 9 Physical Data

Formula: CH3COCH3
Molecular Weight: 58.05
Appearance: Liquid
Odor: No data available
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: 56 C
Flash Point: -20 C
Flammable Limits in Air: LEL: 2.6% - UEL: 12.8 %

Vapor Pressure: 233 hPa at 20 °C
Evaporation Rate (BuAc=1): 14.4
Vapor Density (Air=1): 2.0
Specific Gravity: 0.787 at 25°C
Solubility in Water: Soluble
Log Pow (calculated): -0.24
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: 100%

Section 10 Reactivity Data

Reactivity: Mildly reactive - See below

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: Temperatures above flash point in combination with sparks, open flames, or other sources of ignition.

Incompatible Materials: Caustics (bases), Peroxides, Strong acids, Oxidizing materials, Halogens

Hazardous Decomposition Products: Carbon dioxide, Carbon monoxide

Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation, Ingestion, and Skin contact.
Symptoms (Acute): Eye disorders
Delayed Effects: Central Nervous System Disorders

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Acetone	67-64-1	Oral LD50 Mouse 3000 mg/kg	Dermal LD50 Rabbit 20000 mg/kg	Inhalation LC50 (8h) Rat 50.1 MG/L

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Acetone	67-64-1	Not listed	Not listed	Not listed

Chronic Effects:
Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: Evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: Evidence of negative reproductive effects.
Target Organ Effects:
Acute: Central Nervous System, Cardiovascular system
Chronic: Male Reproductive System

Section 12 Ecological Data

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.
Mobility: This material is expected to have very high mobility in soil. It does not absorb to most soil types.
Persistence: No data
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: Biodegrades quickly.
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Acetone	67-64-1	96 HR LC50 ONCORHYNCHUS MYKISS 4.74 - 6.33 ml/l 96 HR LC50 LEPOMIS MACROCHIRUS 8300 MG/L 48 HR EC50 DAPHNIA MAGNA 12600 - 12700 MG/L

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
UN number: 1090 Class: 3 Packing group: II Proper shipping name: Acetone Reportable Quantity (RQ): 5000 lbs Marine pollutant: No Poison Inhalation Hazard: No

Air - IATA Proper Shipping Name:
UN number: 1090 Class: 3 Packing group: II EMS-No: F-E, S-D Proper shipping name: ACETONE

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Acetone	67-64-1	No	No	5000 lb final RQ; 2270 kg final RQ	No	No

California Prop 65: No California Proposition 65 ingredients

Section 16 Additional Information

Revised: 08/21/2018 **Replaces: 06/15/2018** **Printed: 08-24-2018**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Acetone, ACS Grade

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: DWAC4800-Q

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

Ashland
5200 Blazer Memorial Parkway, Dublin, OH 43017

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:

Flammable
Flammable liquids, category 2

Irritant
Eye irritation, category 2A
Specific target organ toxicity following single exposure, category 3

Flam. Liq. 2.
Eye Irrit. 2A.
STOT SE 3.

Signal word: None

Hazard statements:

Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/light/equipment.
Use only non-sparking tools.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Call a POISON CENTER or doctor/physician if you feel unwell.
If eye irritation persists get medical advice/attention.
In case of fire, use agents recommended in section 5 for extinction.
Store in a well ventilated place. Keep container tightly closed.
Store in a well ventilated place. Keep cool.
Store locked up.
Protect from sunlight.
Dispose of contents and container to an approved waste disposal plant.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 67-64-1	Acetone	100 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

After skin contact:

Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents:

Water may be ineffective.

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Vapors can flow to distant ignition sources and flashback.

Advice for firefighters:

Protective equipment:

Wear protective eyeware, gloves, and clothing. Use NIOSH-approved respiratory protection/breathing apparatus. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational. Avoid contact with eyes, skin, and clothing. Remove all sources of ignition.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyeware, gloves, and clothing. Always obey local regulations. Containerize for disposal. Refer to Section 13. Use spark-proof tools and explosion-proof equipment. Remove all sources of ignition. Refer to Section 8. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use under a chemical fume hood. Use explosion proof equipment. Refer to Section 13.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Keep away from open flames, hot surfaces and sources of ignition. Provide ventilation for containers. Keep container tightly closed. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection



Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

Control parameters: 67-64-1, Acetone, ACGIH TLV TWA 1,200 mg/m3.
67-64-1, Acetone, OSHA PEL TWA 2,400 mg/m3.

Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a chemical fume hood.

Respiratory protection: Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin: Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection: Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures: Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	**Explosion limit lower**: **Explosion limit upper**:	2 %(V) 13 %(V)
Odor:	sweet	**Vapor pressure at 20°C**:	231 mm Hg @ 25°C
Odor threshold:	Not determined	**Vapor density**:	0.791 g/cm3 at 25 °C (77 °F)
pH-value:	7	**Relative density**:	Not determined
Melting/Freezing point:	-94 °C (-137 °F)	**Solubilities**:	Miscible in water.
Boiling point/Boiling range:	56 °C (133 °F)	**Partition coefficient (n-octanol/water)**:	log pow: - 0.24
Flash point (closed cup):	40°C	**Auto/Self-ignition temperature**:	465.0 °C (869.0 °F)
Evaporation rate:	0.1	**Decomposition temperature**:	Not determined
Flammability (solid, gaseous):	Flammable liquid	**Viscosity**:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

Acetone reacts violently with phosphorous oxychloride. Vapours may form explosive mixture with air.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

Conditions to avoid:

Incompatible materials. Heat, Sparks, Open Flames. Direct Sunlight.

Incompatible materials:

Strong oxidizing agents. Strong reducing agents. Strong Bases. Nitric acid. sulfur dichloride potassium tert-butoxide. hexachloromelamine. chloroform. alkali, sulfuric acid.

Hazardous decomposition products:

Carbon oxides.

SECTION 11: Toxicological information

Acute Toxicity:

Dermal:

: LD50 Rabbit: 20000 mg/kg 67-64-1 (acetone).

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

: Rabbit: Mild Skin Irritation - 24 h. 67-64-1 (acetone).

Serious eye damage/irritation:

: Rabbit: Mild Eye Irritation - 24 - h. 67-64-1 (acetone).

Respiratory or skin sensitization:

: guinea pig - Does not cause skin sensitisation.

Carcinogenicity:

Not listed as a carcinogen (ACGIH, IARC, NTP).: 67-64-1 (acetone)

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure:

: May cause drowsiness or dizziness.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

: Fish LC50 - Oncorhynchus mykiss (rainbow trout) - 5,540 mg/l - 96 h, 67-64-1 (acetone).

: Invertebrates EC50 - Daphnia magna (Water flea) - 8,800 mg/l - 48 h, 67-64-1 (acetone).

Persistence and degradability:

Readily biodegradable.

Bioaccumulative potential:

Not expected to bio accumulate.

Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects:

None identified.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

SECTION 13: Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA 1090

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: Acetone.
Hazard Class: 3
Packing Group: II.
Marine Pollutant (if applicable): No
additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Acetone.
Hazard Class: 3
Packing Group: II.
Marine Pollutant (if applicable): No
additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic, Fire

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

67-64-1 Acetone - U002.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

67-64-1 Acetone 5000 lb.

Proposition 65 (California):

Chemicals known to cause cancer:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetone, ACS Grade

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 2-0-0
HMIS: 2-0-0
GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.

Section 1 Chemical Product and Company Identification

Aldon Corporation
221 Rochester Street
Avon, NY 14414
(585) 226-6177

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product	**ACETYLSALICYLIC ACID**
Synonyms	Salicylic acid, acetate ; Aspirin ; 2-(acetyloxy)-Benzoic acid

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS07
Target organs: Blood

GHS Classification:
Acute toxicity, oral (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2A)
STOT-SE (Category 3)

GHS Label information: Hazard statement(s):
H302: Harmful if swallowed.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

Precautionary statement(s):
P261: Avoid breathing dust.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with all local, state and federal regulations.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Acetylsalicylic acid	50-78-2	>99%	200-064-1

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Acetylsalicylic acid	TWA: 5 mg/m^3	None	TWA: 5 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. White, crystalline powder
Odor: No odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: 135°C (275°F)
Boiling point: Decomposes
Flash point: Not flammable
Evaporation rate (Butyl acetate = 1): Negligible
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: Data not available
Vapor pressure (mm Hg): Negligible
Vapor density (Air = 1): Negligible
Relative density (Specific gravity): 1.35
Solubility(ies): 1 g/300 ml water @ 25°C
Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: $2\text{-}CH_3COOC_6H_4COOH$
Molecular weight: 180.16

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures and heat.
Incompatible materials: Strong oxidizers, strong alkali, hydrolyses in moist air. Decomposes in hot water.
Hazardous decomposition products: Carbon oxides.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 1124-1228 mg/kg
Skin corrosion/irritation: Skin-rabbit - Slight irritant.
Serious eye damage/irritation: Eyes-rabbit - Slight irritant.
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory effects.
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Inhalation may cause irritation to mucous membranes and upper respiratory tract.
Ingestion: Ingestion of 10 grams may be fatal.
Skin: Contact with skin may cause irritation.
Eyes: Contact with eyes may cause irritation.
Signs and symptoms of exposure: See Potential health effects above.
Additional information: RTECS #: VO0700000

Section 12 Ecological Information

Toxicity to fish: Leuciscus idus (fish, fresh water), LC50 = >1,000 mg/l/48 hours
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = >100 mg/l/48 hours
Toxicity to algae: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: No
Marine pollutant: No
Exceptions: Not applicable
2016 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL
Acetylsalicylic acid	Listed	Not listed	Not listed	Listed	Not listed

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: January 13, 2017 **Supercedes:** October 20, 2015

SAFETY DATA SHEET

Section 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: AcrylPro Ceramic Tile Adhesive

Product Code: Not Available

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Product Use: Ceramic Tile Adhesive

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEETS

Name/Address: **Custom Building Products**
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Telephone Number: (562)-598-8808

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Telephone Number: INFOTRAC 1-800-535-5053 (US and Canada)
INTERNATIONAL + 1-352-323-3500

Section 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL IN ACCORDANCE WITH PARAGRAPH (d) OF 29 CFR 1910.1200 (OSHA HAZCOM2012)

Acute Toxicity – Oral	**Category 4**
Serious Eye Damage/Eye Irritation	**Category 2**
Germ Cell Mutagenicity	**Category 1B**
Carcinogenicity	**Category 1A**
STOT-RE	**Category 2**

2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM2012

2.2a SIGNAL WORD:
DANGER!

2.2b HAZARD STATEMENTS
Harmful if swallowed
Causes serious eye irritation
May cause genetic defects
May cause cancer
Causes damage to organs through prolonged or repeated exposure

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2.2c HAZARD PICTOGRAMS

2.2d PRECAUTIONARY STATEMENTS

i. PREVENTION	Wash hands thoroughly after handling. Do not breathe dust/fume/gas/mist/ vapors/spray. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.
ii. RESPONSE	If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: call a poison center/doctor. If exposed or concerned: get medical advice/attention
iii. STORAGE	Store in a well-ventilated place. Keep container tightly closed.
iv. DISPOSAL	Dispose of contents/containers in accordance with all local, state, provincial, and federal regulations.

2.3 ADDITIONAL INFORMATION

2.3a HNOC – HAZARDS NOT OTHERWISE CLASSIFIED
Not applicable

2.3b UNKNOWN ACUTE TOXICITY
63% of the mixture consists of ingredient(s) of unknown acute toxicity.

2.3c WHMIS CLASSIFICATION
Class D2B – Skin/Eye Irritant
Class D2A – Very toxic Materials

2.3d LABEL ELEMENTS ACCORDING TO WHMIS

WHMIS HAZARD SYMBOLS

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Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Calcium Carbonate	1317-65-3	30 – 60%*
Ethylene Glycol	107-21-1	1 – 5%*
Stoddard Solvent	8052-41-3	1 – 5%*
Crystalline Silica, Quartz	14808-60-7	1 – 5%*

*Means that the component will fall into one the ranges specified due to batch-to-batch variability.

Section 4: FIRST-AID MEASURES

4.1 DESCRIPTION OF THE FIRST-AID MEASURES

Eye Contact:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
Skin Contact:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
Inhalation:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
Ingestion:	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED

Eye Contact:	Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Skin Contact:	May cause skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis.
Inhalation:	May cause respiratory tract irritation. Causes damage to organs

through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a serious disabling and fatal lung disease.

Ingestion: May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Not applicable

Section 5: FIRE-FIGHTING MEASURES

5.1 FLAMMABILITY

Flammability: **Not Flammable by WHMIS/OSHA HAZCOM2012 Criteria**

5.2 EXTINGUISHING MEDIA

5.2a. Suitable Extinguishing Media:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

5.2b. Unsuitable Extinguishing Media:
CAUTION: Use of water spray when fighting fire may be inefficient

5.3 SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

5.3a. Products of Combustion:
May include, and are not limited to: oxides of carbon

5.3b. Explosion Data

i. **Sensitivity to Mechanical Impact:**
Not available.

ii. **Sensitivity to Static Discharge:**
Not available.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Methods for Containment: Prevent further leakage or spillage if safe to do so. Do not flush to sewer or allow to enter waterways. Use appropriate Personal

Protective Equipment (PPE).

Methods for Cleaning-Up: Pick up and transfer to properly labeled containers

Section 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handling: Use in well-ventilated areas. Wear chemical resistant gloves and eye protection. Do not mix with other chemical products, except as indicated by the manufacturers. Do not get in eyes. Do not get on skin or clothing. Do not breathe fumes. Do not take internally.

General Hygiene Advice: Use good industrial hygiene practices and wear recommended personal protection. Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: Keep out of the reach of children. Keep container tightly closed. Store at room temperature and keep containers closed when not in use.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETER

Exposure Guidelines

Occupational Exposure Limits		
Chemical Name	**OSHA-PEL**	**ACGIH-TLV**
Calcium Carbonate	5 mg/m³ (Resp.) 15 mg/m³ (Total)	5 mg/m³ (Resp.)
Ethylene Glycol	50 ppm	50 ppm
Stoddard Solvent	100 ppm	100 ppm
Crystalline Silica, Quartz	0.1 mg/m³	0.025 mg/m³

8.2 EXPOSURE CONTROLS

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

8.3 INDIVIDUAL PROTECTION MEASURES

8.3a. Personal Protective Equipment:

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i. **Eye/Face Protection:** Wear approved eye protection [properly fitted dust- or splash-proof chemical safety goggles/face (face shield)]

ii. **Skin Protection:**

1. **Hand Protection:** Wear chemical resistant gloves.

2. **Body Protection:** Wear suitable protective clothing

iii. **Respiratory Protection:** A NIOSH approved dust mask or filtering face piece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

iv. **General Health and Safety Measures:** Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.):	Paste liquid, white
Odor:	Latex
Odor Threshold:	Not available
pH:	9
Melting point/Freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash point:	Not available
Evaporation rate (Water=1):	Not available
Flammability:	Not flammable
Upper Flammability/Explosive Limit:	Not available
Lower Flammability/Explosive Limit:	Not available
Vapor Pressure	Not available
Vapor Density:	Not available
Relative Density:	Not available
Solubility in Water:	Slightly Soluble
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition Temperature:	Not available
Viscosity (cps):	Not available
VOC Content:	59 g/L

Section 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

No dangerous reaction known under conditions of normal use.

10.2. CHEMICAL STABILITY
Stable under recommended storage conditions

10.3. POSSIBILITY OF HAZARDOUS REACTION
No dangerous reaction known under conditions of normal use.

10.4. CONDITIONS TO AVOID
Non-available

10.5. INCOMPATIBLE MATERIALS
Non-available

10.6. HAZARDOUS DECOMPOSITION PRODUCTS
Upon decomposition, this product may yield oxides of carbon.

Section 11: TOXICOLOGICAL INFORMATION

11.1. LIKELY ROUTES OF EXPOSURE:
Skin contact, skin absorption, eye contact, inhalation, and ingestion.

11.2. SYMPTOMS RELATED TO PHYSICAL/CHEMICAL/TOXICOLOGICAL CHARACTERISTICS:

Eye Contact: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin Contact: May causes skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis.

Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a serious disabling and fatal lung disease.

Ingestion: May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

Chemical Name	LC50	LD50
Calcium Carbonate	Not available	Not available
Ethylene Glycol	Inhalation > 2.5 mg/L, rat	Oral 4000 mg/kg, rat Dermal 9530 µL/kg, rabbit
Stoddard Solvent	Inhalation: > 5000ppm, rat	Oral: > 5,000 mg/kg, rat
Crystalline Silica, Quartz	Not available	Not available

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Chemical Name	Chemical Listed as Carcinogens or Potential Carcinogen (NTP,IARC,OSHA,ACGIH,CP65)
Calcium Carbonate	Not Listed
Ethylene Glycol	G-A4
Stoddard Solvent	Not Listed
Crystalline Silica, Quartz	N-A2, I-1, O-1, ACGIH-A2, CP65

11.3. DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT AND LONG-TERM EXPOSURE

Skin Corrosion/Irritation:	May cause skin irritation
Serious Eye Damage/Irritation:	Causes serious eye irritation
Respiratory Sensitization:	Not available
Skin Sensitization:	Not available
STOT-Single Exposure:	Not available
Aspiration Hazard:	Not available
Carcinogenicity:	May cause cancer
Germ Cell Mutagenicity:	May cause genetic defects
Reproductive Toxicity:	Not available
STOT-Repeated Exposure:	Causes damage to organs through prolonged or repeated exposure
Synergistic/Antagonistic Effects:	Not available

Section 12: ECOLOGICAL INFORMATION

12.1. ECOTOXICITY

May cause long-term adverse effects to the aquatic environment. Keep from entry into sewers and waterways.

Ecotoxicity		
Chemical Name	**EC50/NOEC-48 Hours**	**LC50/NOEC-96 Hours**
Calcium Carbonate	Not available	Not available
Ethylene Glycol	Not available	Not available
Stoddard Solvent	Not available	Not available
Crystalline Silica, Quartz	Not available	Not available

12.2. PERSISTENCE AND DEGRADABILITY

Not available

12.3. BIOACCUMULATIVE POTENTIAL

Not available

12.4. MOBILITY IN SOIL
Not available

12.5. OTHER ADVERSE EFFECTS
Not available

Section 13: DISPOSAL CONSIDERATIONS

13.1. DISPOSAL METHOD
Dispose of contents/containers in accordance with all local, state, provincial, and federal regulations

13.2. OTHER DISPOSAL CONSIDERATIONS
Not available

Section 14: TRANSPORT INFORMATION

[redacted]	[redacted]
UN NUMBER: Not regulated	**UN NUMBER:** Not regulated
UN PROPER SHIPPING NAME: Not regulated	**UN PROPER SHIPPING NAME:** Not regulated
TRANSPORT HAZARD CLASS (ES): Not regulated	**TRANSPORT HAZARD CLASS (ES):** Not regulated
PACKING GROUP (if applicable): Not regulated	**PACKING GROUP (if applicable):** Not regulated

SUMMARY: Product is not regulated under DOT/TDG and other transportation regulations.

14.1. ENVIRONMENTAL HAZARDS
Not available

14.2. TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE
Not available

14.3. SPECIAL PRECAUTIONS FOR USER
Do not handle until all safety precautions have been read and understood.

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Section 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATIONS SPECIFIC FOR THE CHEMICAL

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

US: SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

15.2. US FEDERAL INFORMATION:

Calcium Carbonate	Not Listed	Not Listed	Not Listed	Not Listed
Ethylene Glycol	Not Listed	Not Listed	5,000	313
Stoddard Solvent	Not Listed	Not Listed	Not Listed	Not Listed
Crystalline Silica, Quartz	Not Listed	Not Listed	Not Listed	Not Listed

15.3. US STATE RIGHT TO KNOW LAWS:

California Proposition 65:	**WARNING!** This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm
Other U.S. States "Right to Know" Lists:	
New Jersey:	Calcium carbonate: **CAS#1317-65-3** Ethylene Glycol: **CAS#107-21-1** Stoddard Solvent: **CAS#8052-41-3** Silica, quartz: **CAS#14808-60-7**
Pennsylvania:	Calcium carbonate: **CAS#1317-65-3** Ethylene Glycol: **CAS#107-21-1** Stoddard Solvent: **CAS#8052-41-3** Silica, quartz: **CAS#14808-60-7**
Massachusetts:	Calcium carbonate: **CAS#1317-65-3** Ethylene Glycol: **CAS#107-21-1** Stoddard Solvent: **CAS#8052-41-3** Silica, quartz: **CAS#14808-60-7**
Minnesota:	Calcium carbonate: **CAS#1317-65-3** Ethylene Glycol: **CAS#107-21-1** Stoddard Solvent: **CAS#8052-41-3** Silica, quartz: **CAS#14808-60-7**
Florida:	Not Available
Michigan:	Not Available

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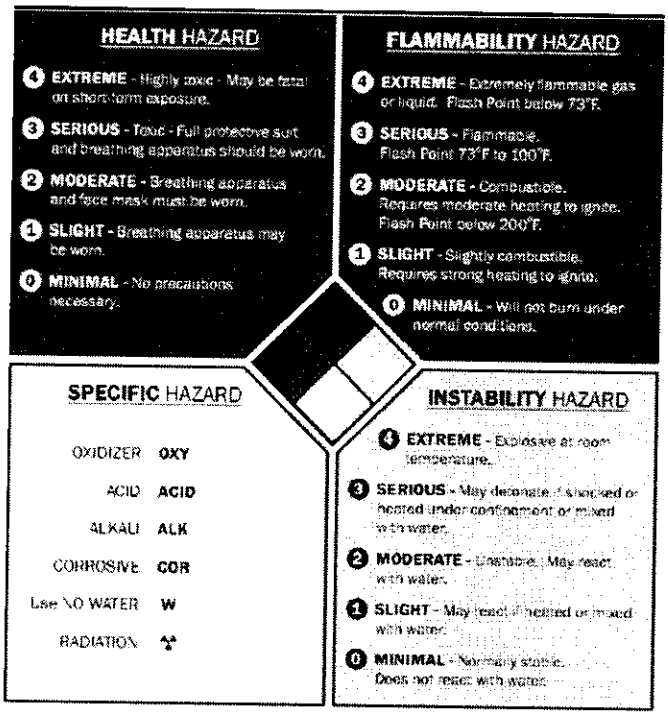
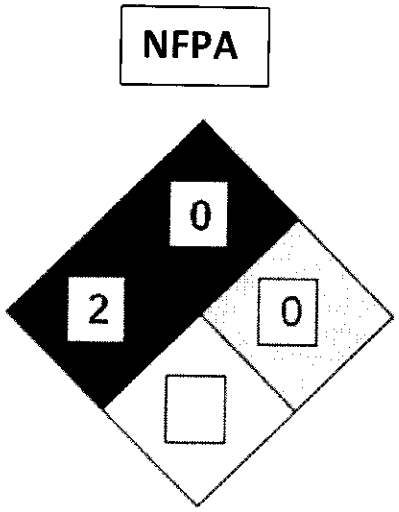
15.4. GLOBAL INVENTORIES

Calcium Carbonate	Yes	DSL(*)
Ethylene Glycol	Yes	DSL
Stoddard Solvent	Yes	DSL
Crystalline Silica, Quartz	Yes	DSL

*Exemption: Natural occurring chemical

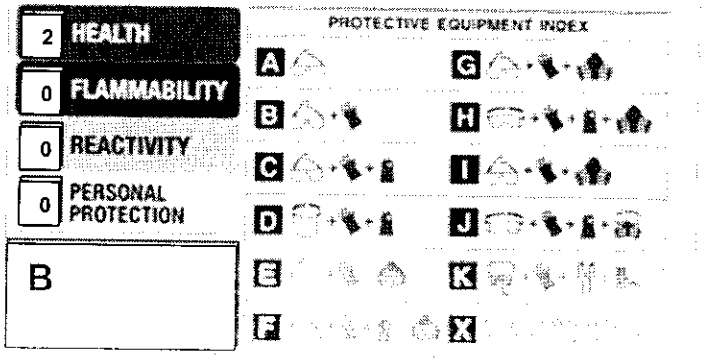
15.5. NFPA AND HMIS RATINGS:





HMIS

Hazard Index	
4	Severe Hazard
3	Serious Hazard
2	Moderate Hazard
1	Slight Hazard



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15.6. SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

CP65	California Proposition 65
OSHA (O)	Occupational Safety and Health Administration
ACGIH (G)	American Conference of Governmental Industrial Hygienists • A1 – Confirmed human carcinogen • A2 – Suspected human carcinogen • A3 – Animal carcinogen • A4 – Not classifiable as a human carcinogen • A5 – Not suspected a human carcinogen
IARC (I)	International Agency for Research on Cancer • 1 – The agent (mixture) is carcinogenic to humans • 2A – The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals. • 2B – The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals. • 3 – The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans. • 4 – The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.
NTP (N)	National Toxicology Program • 1 – Known to be carcinogens • 2 – Reasonably anticipated to be carcinogens

Section 16: OTHER INFORMATION

Date of Preparation: September 16, 2014

Version: 1.0

Revision Date: N/A

Disclaimer: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by:

Custom Building Products
Phone: (562)-968-2980
www.custombuildingproducts.com

End of Safety Data Sheet

Issued to . . . . . : Landscape Structures Inc.
601 7th Street South, Rt.3
P.O. Box 198

Delano, MN 55328

Attention: . . . . . : Material Safety Data Sheet Coordinator

The attached Material Safety Data Sheet relates potential hazards and recommended practices for safe handling of the product that you purchased from Raabe Corporation.

We urge you and your employees to review the entire MSDS prior to handling, use or disposal of the product.

You are required to keep this MSDS on file for reference by company employees or government regulatory officials.

If you resell or distribute this product, you must furnish a copy of the MSDS to your customer.

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL PRODUCT IDENTIFICATION:
PRODUCT CODE. . . . : 62285 033297 406
PRODUCT NAME . . . : 101219-00-001 BLUE IF-7348M
PRODUCT CLASS . . . : Aerosol Touch-Up

MSDS PREPARATION DATE : 03/01/2005

MANUFACTURER IDENTIFICATION:
RAABE COMPANY LLC
PO BOX 1090

MENOMONEE FALLS WI 53052

CUSTOMER IDENTIFICATION:
Landscape Structures Inc.
601 7th Street South, Rt.3
P.O. Box 198
Delano, MN 55328

EMERGENCY TELEPHONE NUMBERS:
24 HOURS A DAY - CALL CHEMTREC : 800-424-9300
INTERNATIONAL CALLS TO CHEMTREC : 703-527-3887
8 AM TO 4:30 PM CENTRAL TIME : 262-255-9500

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

---

1 ETHYLBENZENE
CAS# 100-41-4
ETHYLBENZENE

PCT BY WT: 2.2920 VAPOR PRESSURE: 19.000 MMHG @ 68F LEL 1.20
EXPOSURE LIMIT:
ACGIH TLV-TWA 100 ppm
ACGIH TLV-STEL 125 ppm
OSHA PEL-TWA 100 ppm
OSHA PEL-STEL 125 ppm
OTHER IARC (2B), CALIFORNIA PROP 65 (6/11/04)

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2 N-BUTANE
CAS# 106-97-8
N-BUTANE
PCT BY WT: 6.0000 VAPOR PRESSURE: 879.100 MMHG @ 68F LEL 1.80
EXPOSURE LIMIT:
ACGIH TLV-TWA 800 ppm
ACGIH TLV-STEL NO INFO
OSHA PEL-TWA 800 ppm
COMPANY N.E.

---

3 PROPANE
CAS# 74-98-6
PROPANE
PCT BY WT: 18.0000 VAPOR PRESSURE: 5585.200 MMHG @ 68F LEL 2.20
EXPOSURE LIMIT:
ACGIH TLV-TWA 1000 ppm
ACGIH TLV-STEL NO INFORMATION

---

4 TITANIUM DIOXIDE
CAS# 13463-67-7
TITANIUM DIOXIDE
PCT BY WT: 1.0000
EXPOSURE LIMIT:
ACGIH TLV-TWA 10 mg/m3
ACGIH TLV-STEL NO INFO
OSHA PEL-TWA 10 mg/m3
COMPANY N.E.

---

5 XYLENE
CAS# 1330-20-7
XYLENE
PCT BY WT: 10.0000 VAPOR PRESSURE: 6.600 MMHG @ 68F LEL 1.00
EXPOSURE LIMIT:
ACGIH TLV-TWA 100 ppm
ACGIH TLV-STEL 150 ppm
OSHA PEL-TWA 100 ppm
OSHA PEL-STEL 150 ppm
COMPANY N.E.
LD50(ORAL) 4300 mg/kg
LD50(DERMAL) 1700 mg/kg
LC50 18892 mg/m3

---

6 Pigment Blue 15:2
CAS# 147-14-8
Copper Phthalocyanine
PCT BY WT: 1.0000

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7 ACETONE
CAS# 67-64-1

ACETONE
PCT BY WT: 37.0000 VAPOR PRESSURE: 231.000 MMHG @ 68F LEL 2.60
EXPOSURE LIMIT:

ACGIH TLV-TWA	750 ppm
ACGIH TLV-STEL	1000 ppm
OSHA PEL-TWA	750 ppm
OSHA PEL-STEL	1000 ppm
COMPANY	N.E.

β GLYCOL ETHER PM ACETATE
CAS# 108-65-6
PROPYLENE GLYCOL METHYL ETHER ACETATE
PCT BY WT: 10.0000 VAPOR PRESSURE: 3.700 MMHG @ 68F LEL 1.30
EXPOSURE LIMIT:

ACGIH TLV-TWA	NOT ESTABLISHED
ACGIH TLV-STEL	NOT ESTABLISHED

****

This product contains one or more reported carcinogens or suspected carcinogens which are noted NTP, IARC, or OSHA-Z in the other limits recommended column.

****
****

This substance is classified as a hazardous air pollutant.

****

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
May be fatal if swallowed.
Harmful if inhaled.
Harmful if absorbed through skin.
Causes eye irritation.
Causes skin irritation.
Vapors irritating to eyes and respiratory tract.
Extremely flammable liquid and vapor.
Vapors may cause flash fire or explosion.
Extremely flammable aerosol.
Contents under pressure.

EYE:
May cause severe eye irritation.

SKIN:
May cause skin irritation.
Prolonged contact with the skin can cause chemical burns.
Harmful if absorbed through the skin.
Material may aggravate an existing dermatitis.

INHALATION:
Exposure to high concentrations of vapors may cause dizziness, breathing difficulty, headaches or respiratory irritation.
Extremely high concentrations may cause drowsiness, staggering, confusion, unconsciousness, coma or death.
Excessive inhalation of vapors can cause nasal and respiratory irritation.
Liquid or vapor may be irritating to skin, eyes, throat or lungs.
Intentional misuse by deliberately concentrating and inhaling the contents of this product can be harmful or fatal.

INGESTION:
Moderately toxic. May cause stomach discomfort, nausea, vomiting, diarrhea, and narcosis.
Aspiration of material into the lungs if swallowed or if vomiting occurs can cause chemical pneumonitis which can be fatal.
May cause nausea, vomiting and diarrhea.

CHRONIC EFFECTS:
Chronic overexposure to a component or components in this material has been found to cause the following effects in laboratory animals:

- Kidney damage
- Eye damage
- Lung damage
- Liver damage
- Spleen damage
- Anemia
- Red blood cell damage

Chronic overexposure to a component or components is this product has been suggested as a cause of the following effects in humans:

- Cardiac abnormalities

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.
Rats exposed to titanium dioxide dust at 250 mg/m3 developed lung cancer, however, such exposure levels are not attainable in the workplace with this material.
In February 2000 the International Agency for Research on Cancer (IARC) classified ethylbenzene as possibly carcinogenic to humans (Group 2B) on the basis of sufficient evidence for carcinogenicity in experimental animals but inadequate evidence for cancer in humans.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:
Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
Flush with large quantities of water for 15 minutes.

SKIN CONTACT:
Wash thoroughly with soap and water and seek medical attention if irritation persists. Remove contaminated clothing. Launder contaminated clothing before reuse.

INHALATION:
For inhalation overexposure move person to fresh air. If breathing stops, apply artificial respiration and seek medical attention.

INGESTION:
Since this product may contain materials which can cause lung damage if aspirated into the lungs, the decision whether to induce vomiting or not must be made by a physician after careful consideration of all materials ingested.

SECTION 5 - FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES OF THE PRODUCT:

Flashpoint	: Less Than -25 øF
Explosion Level	: LOW (LEL) - 1.0
	High (UEL)- 13.1

EXTINGUISHING MEDIA:
Use Dry Chemical, Carbon Dioxide or Chemical Foam.

FIRE-FIGHTING PROCEDURES AND EQUIPMENT:
Keep containers tightly closed. Isolate from heat, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Contents under pressure. Do not use or store near sources of heat, sparks or open flame. Keep away from any source of heat such as sunlight, heaters or stoves that could cause the container to burst. Do not puncture or incinerate. Do not crush or place in a garbage compactor. Do not store above 120 degrees F. Aerosol containers may explode when exposed to extreme heat.
Product vapors are heavier than air and may travel a long distance to a source of ignition and flash back.
Full protective equipment including self-contained breathing apparatus to avoid inhalation of vapors should be used.
Water spray should not be used except to keep down vapors or cool closed containers to prevent build-up of pressure. If water is used, fog nozzles are preferred.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CLEAN-UP AND CONTAINMENT:
Remove all sources of ignition. Avoid heat, sparks, flames and anything which could cause fire.
Ventilate area of spill and adjacent low lying areas. Avoid breathing solvent vapors. Remove with inert absorbent materials and non-sparking tools.

SECTION 7 - HANDLING AND STORAGE

HANDLING:
Wash hands thoroughly after handling.
This product contains chemical(s) which are listed on California's proposition 65 list. If the product is to be sold or used in California the following warning statement must appear on the label:
Warning! This product contains a chemical or chemicals known to the State of California to cause cancer.

STORAGE:
Store in a cool dry area with ventilation suitable for storing materials shown in section 2.
Keep away from heat, sparks and flame.
Store in a cool place away from direct sunlight or any source of ignition. Do not store at temperatures above 120 degrees F.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROLS:
Sufficient ventilation, in volume and pattern, should be provided to keep air contamination below current applicable OSHA permissible exposure limit or ACGIH's TLV limit.

RESPIRATORY PROTECTION:
If workplace exposure limits are exceeded for any component(see section 2 for hazardous components and exposure limits), a NIOSH/OSHA approved respirator suitable for components listed is recommended.

SKIN PROTECTION:
Chemical resistant plastic or rubber gloves recommended for prolonged or repeated contact.

EYE PROTECTION:
Chemical goggles with side shields or face shield recommended if contact

with the eyes is likely.

OTHER PROTECTIVE EQUIPMENT:
Appropriate impervious clothing is recommended if prolonged or repeated contact is likely.

HYGIENIC PRACTICES:
Wash hands before eating or smoking. Smoke in designated areas only.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure	5585.20	mm Hg @ 20 C
Vapor Density	3.70	
Boiling Range	Lower - 1.0	øF
	Higher - 302.0	øF
Specific Gravity	.765	
Formula Weight per Volume	6.3653	LB/GL
VOC (Calculated, LB/GAL)	4.494	
VOC (Calculated, GM/L)	538.51	
Percent Volatile by Weight	83.1313	
Percent Volatile by Volume	89.5789	
Evaporation Rate	7.700	(n-Butyl Acetate = 1)
Viscosity	-N/A	

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID:
Avoid contact with heat, sparks, and open flame.
Product may explode if heated. Keep cool, avoid exposure to heat.

INCOMPATIBILITIES:
Strong oxidizing agents.

DECOMPOSITION:
Thermal decomposition may produce carbon dioxide, carbon monoxide, and unidentifiable organic materials.
Product may produce toxic fumes when burned.

POLYMERIZATION:
No hazardous polymerization will occur under normal conditions.

STABILITY:
The product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

No specific information is available. Please refer to Section 2 and 3 for available information on exposure limits and hazards identification.

SECTION 12 - ECOLOGICAL INFORMATION

No specific ecological information is available for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:
Place in closed containers. Dispose of product in accordance with local, county, state, and federal regulations.

SECTION 14 - TRANSPORT INFORMATION

Ground shipment of limited or excepted quantities of aerosols or liquid paint in containers of 1 quart or less:

CONSUMER COMMODITY, ORM-D
Ground shipment of liquid paint in containers more than 1 quart:
PAINT, FLAMMABLE LIQUID, UN1263, CLASS 3, GROUP II
(Regulatory sources: DOT 49CFR 172.101)

Air shipment of limited or excepted quantities of aerosols or liquid paint in containers of 1 quart or less:
CONSUMER COMMODITY, ID 8000, CLASS 9 MISCELLANEOUS LABEL
(Regulatory sources: ATAI Quantity Exemptions - Table 2.8.4, 2.7.A, 2.7.5, Packaging Instruction: 910)
OR
AEROSOLS, FLAMMABLE, UN1950, CLASS 2.1 LABEL
(Regulatory sources: ATAI Quantity Exemptions - Table 2.9.1, 2.8.4, Packaging Instruction: Y203)

SECTION 15 - REGULATORY INFORMATION

SARA 313 INFORMATION:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

ETHYLBENZENE
CAS# 100-41-4 PCT BY WT: 2.2920

XYLENE
CAS# 1330-20-7 PCT BY WT: 9.9580

FEDERAL REGULATIONS:
TOXIC SUBSTANCES CONTROL ACT: The chemical substances in this product are listed on the TSCA Section 8 inventory.
STATE REGULATIONS:
NEW JERSEY RIGHT-TO-KNOW
The following non-hazardous ingredients are among the top five components in this product

CHEMICAL NAME	CAS NUMBER
ALKYD RESIN SOLIDS	NONE

PENNSYLVANIA RIGHT-TO-KNOW
The following non-hazardous ingredients are present in the product at greater than 3 %

CHEMICAL NAME	CAS NUMBER
ALKYD RESIN SOLIDS	NONE
Acrylic Polymer	Not Listed

INTERNATIONAL REGULATIONS:
CANADA: The chemical substances in this product are listed on the Canadian Domestic Substances List.

SECTION 16 - OTHER INFORMATION

The information contained on this MSDS is believed to be reliable and accurate. Due to the changing nature of government information, it is impossible to guarantee the accuracy of the information contained herein. Since the conditions of handling and use are beyond our control, we make

no guarantee of results and assume no liability for damages incurred by the use of this material. This information should not be regarded as legal advice or regulation. It is the responsibility of the user to comply with all Federal, State, and Local laws and regulations. For questions relating to specific aspects of the requirements and regulations consult the proper regulatory agency.

HMIS RATINGS:

HEALTH: 2* FLAMMABILITY: 4 REACTIVITY: 0 PERSONAL PROTECTION: G

Safety Data Sheet

2% AGAR

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name:	2% AGAR
Recommended Use:	Science education applications
Synonyms:	None known
Distributor:	Carolina Biological Supply Company 2700 York Road, Burlington, NC 27215 1-800-227-1150
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec:	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:

Other Safety Precautions: Not a dangerous substance according to GHS classification criteria.
No known OSHA hazards.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Water	7732-18-5	98
Agar	9002-18-0	2

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation:	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact:	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
Ingestion:	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media:	Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection:	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards:	N/A
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: No adverse health affects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS.
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Do not allow the spilled product to enter public drainage system or open waterways.

Safety Data Sheet

Section 7 Handling and Storage

Handling: Do not ingest or take internally.
Storage: Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	(TWA)	(STEL)	(TWA)	(STEL)
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Natural latex,, Natural rubber, Nitrile, Polyvinyl chloride

Section 9 Physical Data

Formula: See Section 3
Molecular Weight: N/A
Appearance: Off-white to tan Solid
Odor: No data available
Odor Threshold: No data available
pH: 5.0 - 7 at 15 g/l at 50 °C
Melting Point: No data available
Boiling Point: 100 C
Flash Point: No data available
Flammable Limits in Air: N/A

Vapor Pressure: N/A
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): N/A
Specific Gravity: N/A
Solubility in Water: Slightly Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: 10
Percent Volatile by Volume: 0%

Section 10 Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known.
Incompatible Materials: Water-reactive materials
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation and ingestion.
Symptoms (Acute): N/A
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		

Agar	9002-18-0	Oral LD50 Mouse 16000 mg/kg

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available		Not listed	Not listed	Not listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12 Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
N/A

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
No data available		No	No	No	No	No

Section 16 Additional Information

Revised: 09/12/2014 **Replaces: 09/03/2014** **Printed: 09-12-2014**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health

Safety Data Sheet

Agarose

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name:	Agarose
Recommended Use:	Science education applications
Synonyms:	Agar-agar, neutral gelatin fraction
Distributor:	Carolina Biological Supply Company 2700 York Road, Burlington, NC 27215 1-800-227-1150
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec:	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:

Other Safety Precautions:	Not a dangerous substance according to GHS classification criteria. No known OSHA hazards.
Acute Toxicity Oral Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Dermal Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Gas Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Vapor Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Dust/Mist Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Agarose, 100%	9012-36-6	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation:	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact:	After contact with skin, wash immediately with plenty of water.
Ingestion:	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media:	Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection:	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards:	N/A
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:	No adverse health affects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Avoid creating and inhaling dust. Avoid contact with skin and eyes.

No special spill clean-up considerations. Collect and discard in regular trash. Reduce airborne dust and prevent scattering by moistening with water Vacuum or sweep up material and place in a disposal container

Section 7 Handling and Storage

Handling: Keep container dry.
Storage: Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	(TWA)	(STEL)	(TWA)	(STEL)
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Natural rubber, Neoprene, PVC or equivalent.

Section 9 Physical Data

Formula: A polysaccharide complex
Molecular Weight: N/A
Appearance: White Powder
Odor: No data available
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: No data available
Flash Point: No data available
Flammable Limits in Air: N/A

Vapor Pressure: N/A
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): N/A
Specific Gravity: N/A
Solubility in Water: Slightly Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: N/A

Section 10 Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known.
Incompatible Materials: Strong oxidizing agents
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation and ingestion.
Symptoms (Acute): Respiratory disorders, Eye disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
No data available	9012-36-6	Not determined	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available	9012-36-6	Not listed	Not listed	Not listed

Chronic Effects:

Mutagenicity:	No evidence of a mutagenic effect.
Teratogenicity:	No evidence of a teratogenic effect (birth defect).
Sensitization:	No evidence of a sensitization effect.
Reproductive:	No evidence of negative reproductive effects.
Target Organ Effects:	
Acute:	See Section 2
Chronic:	Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12 Ecological Data

Overview:	This material is not expected to be harmful to the ecology.
Mobility:	No data
Persistence:	No data
Bioaccumulation:	No data
Degradability:	No data
Other Adverse Effects:	No data

Chemical Name	CAS Number	Eco Toxicity
N/A	9012-36-6	

Section 13 Disposal Information

Disposal Methods:	Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s):	Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
N/A

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
No data available	9012-36-6	No	No	No	No	No

Section 16 Additional Information

Revised: 09/05/2014 **Replaces: 09/05/2014** **Printed: 09-11-2014**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

COLGATE-PALMOLIVE Company
SAFETY DATA SHEET

AJAX CLEANER POWDER-OXYGEN BLEACH

This industrial Safety Data Sheet is not intended for consumers and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Version 1.1 | SDS Number: 660000000222 | Revision Date: 05/14/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AJAX CLEANER POWDER-OXYGEN BLEACH

Product code : 200000017621

: B01809190000

Manufacturer or supplier's details

Company : Colgate-Palmolive Co
Commerical Consumer Group
191 East Hanover Avenue
Morristown, NJ 07960-3151

Telephone : US: Consumer Affairs - 1-800-468-6502

Emergency telephone number : For emergencies involving spill, leak, fire, exposure or accident call CHEMTREC (24hr) at (800) 424-9300 or (703) 527-3887.

Medical Emergency (24HR): For MEDICAL EMERGENCIES involving this product call: (888) 489-3861

Recommended use of the chemical and restrictions on use

Recommended use : A formulated multi-purpose cleaner

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	powder
Colour	off-white

GHS Classification

Acute toxicity (Inhalation) : Category 4

GHS Label element

Hazard pictograms :

Signal word : Warning

Hazard statements : H332 Harmful if inhaled.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.
Response:
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

Potential Health Effects

Inhalation : May be harmful if inhaled.

Skin : May cause skin irritation upon prolonged contact.

Eyes : Causes eye irritation on direct contact.

Ingestion : May be harmful if swallowed in large quantities.

Aggravated Medical Condition : None known.

Carcinogenicity:

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
LIMESTONE	1317-65-3	>= 90 - <= 100
SODIUM CARBONATE	497-19-8	>= 5 - < 10

SECTION 4. FIRST AID MEASURES

If inhaled : Remove victim to fresh air. Get medical attention, if symptoms persist.

In case of skin contact	:	Flush skin with large amounts of water. If irritation develops and persists, get medical attention.
In case of eye contact	:	Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
If swallowed	:	Drink 8 ounces of clear water. Get medical attention.
Most important symptoms and effects, both acute and delayed	:	Harmful if inhaled.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Hazardous combustion products	:	No hazardous combustion products are known
Special protective equipment for firefighters	:	Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protection recommended in Section 8 of the SDS.
Methods and materials for containment and cleaning up	:	Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

SECTION 7. HANDLING AND STORAGE

Conditions for safe storage	:	Store at controlled room temperature at 20-25°C (68-77°F).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
LIMESTONE	1317-65-3	TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (Respirable)	5 mg/m3	NIOSH REL

		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	15 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0

Engineering measures : In an industrial work environment, no special precautions or control measures are required.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Protective measures : In an industrial work environment, if a splash is likely, chemical goggles may be needed. Prolonged skin contact may require protective gloves. For consumer use, no unusual precautions are necessary.

Hygiene measures : In an industrial work environment, avoid eye and prolonged skin contact.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Colour : off-white

pH : 10.4

Flash point : No data available

Density : 1.04 g/cm3

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if inhaled.

Product:

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate : 1.63 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method

Components:

LIMESTONE:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 420
Acute inhalation toxicity	:	LC50 (Rabbit): > 3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402

SODIUM CARBONATE:

Acute oral toxicity	:	LD50 (Rat): 2,800 mg/kg
Acute inhalation toxicity	:	LC50 (Rabbit): 2.3 mg/l Exposure time: 2 h Test atmosphere: No information available. Method: No information available.
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Method: No information available.

Skin corrosion/irritation

Not classified based on available information.

Components:

LIMESTONE:

Result: No skin irritation

SODIUM CARBONATE:
Remarks: No data available

Serious eye damage/eye irritation

Not classified based on available information.

Components:

LIMESTONE:
Result: No eye irritation

SODIUM CARBONATE:
Result: Irritation to eyes, reversing within 21 days

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Components:

LIMESTONE:
Exposure routes: Inhalation
Result: Does not cause respiratory sensitisation.

Exposure routes: Dermal
Result: Does not cause skin sensitisation.

SODIUM CARBONATE:
Exposure routes: Inhalation
Remarks: No data available

Exposure routes: Dermal
Remarks: No data available

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the SDS.

SECTION 12. ECOLOGICAL INFORMATION

The product has not been tested as a whole for environmental toxicity. However, environmental information on the ingredients in this product have been reviewed by the Environmental, Health and Safety group of Colgate-Palmolive and determined to have an acceptable environmental profile. This evaluation is based on available information on individual ingredients, interactions of ingredients, and similar ingredients. Biodegradability claims are supported by data on ingredients (i.e., surfactants are biodegradable) or testing conducted on the final product (i.e., This product is biodegradable).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environment agency for specific rules). Do not dump in sewers, any body of water or on the ground.

SECTION 14. TRANSPORT INFORMATION

DOT : Not regulated.

TDG : Not regulated.

IATA : Not regulated.

IMDG : Not regulated.

International Regulation

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Combustible dust, Moderate skin irritant, Severe eye irritant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SODIUM DODECYL BENZENE SULFONATE	25155-30-0	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

SODIUM DODECYL BENZENE SULFONATE	25155-30-0
Sulfuric Acid	SULFURIC ACID

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

SODIUM DODECYL BENZENE SULFONATE	25155-30-0
Sulfuric Acid	SULFURIC ACID

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

LIMESTONE	1317-65-3
SODIUM DODECYL BENZENE SULFONATE	25155-30-0
Sulfuric Acid	SULFURIC ACID
SULFUR DIOXIDE	7446-09-5

Pennsylvania Right To Know

LIMESTONE	1317-65-3
SODIUM CARBONATE	497-19-8
SODIUM DODECYL BENZENE SULFONATE	25155-30-0
Sulfuric Acid	SULFURIC ACID
SULFUR DIOXIDE	7446-09-5
SODIUM SULFATE	7757-82-6

New Jersey Right To Know

LIMESTONE	1317-65-3
SODIUM CARBONATE	497-19-8
SODIUM DODECYL BENZENE SULFONATE	25155-30-0

California Prop 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA : All ingredients in this product are listed on the TSCA Inventory or are not required to be listed on the TSCA Inventory.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

COLGATE-PALMOLIVE Company
SAFETY DATA SHEET

AJAX CLEANER POWDER-OXYGEN BLEACH

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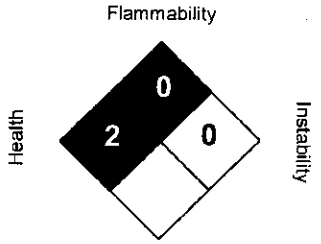
Version 1.1 SDS Number: 660000000222 Revision Date: 05/14/2015

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Disclaimer: The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

SAFETY DATA SHEET

6/2/2015

SECTION I - IDENTIFICATION

Material Name
AKUA KOLOR

Manufacturer Information
Speedball Art Products Co.
P.O. Box 5157
2301 Speedball Road
Statesville, North Carolina 28677
Phone: 704-978-4166
Fax: 1-704-838-1472
Email: budmartin@speedballart.com

For transportation emergencies only call: 1-800-898-7224
For health emergencies call the Poison Control Center: 1-888-516-2502

SECTION II - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Skin Sensitization - Category 1

GHS Label Elements

Symbol(s)

Signal Word(s)
Danger

Hazard Statement(s)
May cause an allergic skin reaction

Precautionary Statement(s)

Prevention
Avoid breathing dust/fume/gas/mist/vapours/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response
Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

SECTION III - COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	PEL/TLV (MG/M#)	Max % Weight	NTP	IARC
None					
BENZISOTHIAZOLINONE	2634-33-5	N/A	0.12000	N	N

SECTION IV - FIRST AID MEASURES

FIRST AID MEASURES: NONE REQUIRED. NO ACUTE HEALTH EFFECTS EXPECTED.

SECTION V - FIRE FIGHTING MEASURES

FLASH POINT (METHOD): N/A
AUTOIGNITION TEMPERATURE: N/A
EXPLOSION LIMITS IN AIR (% BY VOLUME): NOT EXPLOSIVE
EXTINGUISHING MEDIA: NO SPECIAL MEDIA REQUIRED
FIRE FIGHTING PROCEDURES: NO SPECIAL FIRE FIGHTING PROCEDURES REQUIRED
UNUSUAL FIRE & EXPLOSION HAZARDS: NOT COMBUSTIBLE

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE A MATERIAL IS SPILLED: Clean up in accordance with all applicable regulations. Absorb spillage with non-combustible, absorbent material. For waste disposal, see Section XIII

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING STORAGE AND HANDLING: Good industrial hygiene practice requires that exposure be maintained below the TLV. This is preferably achieved through the provision of adequate ventilation. When exposure cannot be adequately controlled in this way, personal respiratory protection should be employed.

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION AND SPECIAL VENTILATION REQUIREMENTS: NONE REQUIRED
OTHER PROTECTIVE EQUIPMENT (GLOVES, GOGGLES, ETC): NONE REQUIRED
WORK/HYGIENE PRACTICES: NONE REQUIRED
ENGINEERING CONTROLS: NONE REQUIRED

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A
MELTING POINT: N/A
VAPOR PRESSURE: N/A
SPECIFIC VAPOR DENSITY (AIR=1): N/A
SPECIFIC GRAVITY: N/A
SOLUBILITY IN WATER: N/A
REACTIVITY IN WATER: NON-REACTIVE

SECTION X - STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION PRODUCTS: NONE
STABILITY: STABLE CONDITIONS TO AVOID: NONE
INCOMPATIBILITY (MATERIALS TO AVOID): NONE
HAZARDOUS DECOMPOSITION PRODUCTS: NONE

SECTION XI - TOXICOLOGICAL INFORMATION

ACUTE EFFECTS ASSOCIATED WITH USE OF THIS MATERIAL: NONE EXPECTED
The summated LD50 is 39808 mg/kg.
The summated LC50 is 99999 mg/cubic meter.
This product is not considered to be a known or suspected human carcinogen by NTP, IARC or OSHA (see section III)

SECTION XII - ECOLOGICAL INFORMATION

NO HARMFUL EFFECTS KNOWN OTHER THAN THOSE ASSOCIATED WITH SUSPENDED INERT SOLIDS IN WATER.

SECTION XIII - DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS (40 CFR 261): THIS PRODUCT IS NOT CLASSIFIED AS A HAZARDOUS WASTE.
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION XIV - TRANSPORTATION INFORMATION

U.S. DOT (49 CFR 172.101): THIS IS NOT A HAZARDOUS MATERIAL AS CLASSIFIED BY CFR 172.101.

SECTION XV - REGULATORY INFORMATION

CONTENTS OF THIS SDS COMPLY WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200
EPA SARA TITLE III CHEMICAL LISTINGS
NONE

SECTION 302.4 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
NONE

SECTION 313 TOXIC CHEMICALS (40 CFR 372):
IODOPROPYNL BUTYL CARBAMATE

INTERNATIONAL REGULATIONS

CANADIAN WHMIS: THIS PRODUCT IS A CONTROLLED PRODUCT UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. IT CONTAINS THE FOLLOWING TOXIC OR HIGHLY TOXIC MATERIALS:
GUM ARABIC

SUPPLEMENTAL STATE COMPLIANCE INFORMATION:

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED UNDER NEW JERSEY'S RIGHT TO KNOW PROGRAM:
GUM ARABIC

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) REQUIRING NOTIFICATION TO THE STATE OF WASHINGTON UNDER THEIR CHILDREN'S SAFE PRODUCTS ACT:
NONE

Under CPSC's consumer product regulations (16CFR1500.3 and 150014), this product has the following required acute and chronic hazard labeling:

NONE

SECTION XVI - OTHER INFORMATION

LAST REVISION DATE: 06/02/2015

Alcohol Prep Pads

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 14/04/2014 Revision date: : Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Trade name : Alcohol prep pads 6.5 x 3 cm

Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Antiseptic Cleanser

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer:

Henry Schein Inc.
135 Duryea Road
Melville, NY 11747 USA

Supplier:

Henry Schein UK Holdings Ltd.
Medcare House, Centurion Close
Gillingham Business Park
Gillingham, ME8 0SB U.K.
Telefon +44 (0) 1892 87050; Fax +44 (0) 1634 87 87 51
E-mail: cbdeurope@henryschein.de

1.4. Emergency telephone number

Emergency number : Chemtrec US (800) 424-9300 - International: 001 703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225

Eye Irrit. 2 H319

STOT SE 3 H336

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11

Xi; R36

R67

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour
H319 - Causes serious eye irritation

H336 - May cause drowsiness or dizziness

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting equipment
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P264 - Wash hands thoroughly after handling
P280 - Wear Eye / face protection
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: get medical advice/attention

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Isopropyl alcohol	(CAS No) 67-63-0 (EC no) 200-661-7 (EC index no) 603-117-00-0	68 - 72	F; R11 Xi; R36 R67

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Isopropyl alcohol	(CAS No) 67-63-0 (EC no) 200-661-7 (EC index no) 603-117-00-0	68 - 72	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

First-aid measures after skin contact : If rash or irritation develops, discontinue use. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause drowsiness or dizziness.

Symptoms/injuries after eye contact : Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapours/spray.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Dispose of contents/container to comply with applicable local, national and international regulations.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No naked lights. No smoking. Use only non-sparking tools. Avoid breathing gas, fumes, vapour or spray. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Isopropyl alcohol (67-63-0)		
Austria	MAK (mg/m³)	500 mg/m³ (short time value for large casting)
Austria	MAK (ppm)	200 ppm (short time value for large casting)
Austria	MAK Short time value (mg/m³)	2000 mg/m³ (STEL for large casting valid till 12/31/2013)
Austria	MAK Short time value (ppm)	800 ppm (STEL for large casting valid till 12/31/2013)
Belgium	Limit value (mg/m³)	500 mg/m³
Belgium	Limit value (ppm)	200 ppm
Belgium	Short time value (mg/m³)	1000 mg/m³
Belgium	Short time value (ppm)	400 ppm
Bulgaria	OEL TWA (mg/m³)	980.0 mg/m³
Bulgaria	OEL STEL (mg/m³)	1225.0 mg/m³
Czech Republic	Expoziční limity (PEL) (mg/m³)	500 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	490 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	200 ppm
Estonia	OEL TWA (mg/m³)	350 mg/m³
Estonia	OEL TWA (ppm)	150 ppm
Estonia	OEL STEL (mg/m³)	600 mg/m³

Isopropyl alcohol (67-63-0)		
Estonia	OEL STEL (ppm)	250 ppm
Finland	HTP-arvo (8h) (mg/m³)	500 mg/m³
Finland	HTP-arvo (8h) (ppm)	200 ppm
Finland	HTP-arvo (15 min)	620 mg/m³
Finland	HTP-arvo (15 min) (ppm)	250 ppm
France	VLE (mg/m³)	980 mg/m³
France	VLE (ppm)	400 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	500 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	200 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 (BGW)	25 mg/l (Medium: whole blood - Time: end of shift - Parameter: Acetone) 25 mg/l (Medium: urine - Time: end of shift - Parameter: Acetone)
Greece	OEL TWA (mg/m³)	980 mg/m³
Greece	OEL TWA (ppm)	400 ppm
Greece	OEL STEL (mg/m³)	1225 mg/m³
Greece	OEL STEL (ppm)	500 ppm
Hungary	AK-érték	500 mg/m³
Hungary	CK-érték	2000 mg/m³
Ireland	OEL (8 hours ref) (ppm)	200 ppm
Ireland	OEL (15 min ref) (ppm)	400 ppm
Latvia	OEL TWA (mg/m³)	350 mg/m³
Lithuania	IPRV (mg/m³)	350 mg/m³
Lithuania	IPRV (ppm)	150 ppm
Lithuania	TPRV (mg/m³)	600 mg/m³
Lithuania	TPRV (ppm)	250 ppm
Poland	NDS (mg/m³)	900 mg/m³
Poland	NDSCh (mg/m³)	1200 mg/m³
Portugal	OEL TWA (ppm)	200 ppm
Portugal	OEL STEL (ppm)	400 ppm
Romania	OEL TWA (mg/m³)	200 mg/m³
Romania	OEL TWA (ppm)	81 ppm
Romania	OEL STEL (mg/m³)	500 mg/m³
Romania	OEL STEL (ppm)	203 ppm
Slovakia	NPHV (priemerná) (mg/m³)	500 mg/m³
Slovakia	NPHV (priemerná) (ppm)	200 ppm
Slovakia	NPHV (Hraničná) (mg/m³)	1000 mg/m³
Slovenia	OEL TWA (mg/m³)	500 mg/m³
Slovenia	OEL TWA (ppm)	200 ppm
Slovenia	OEL STEL (mg/m³)	2000 mg/m³
Slovenia	OEL STEL (ppm)	800 ppm
Spain	VLA-ED (mg/m³)	500 mg/m³ (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound)
Spain	VLA-ED (ppm)	200 ppm (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound)
Spain	VLA-EC (mg/m³)	1000 mg/m³
Spain	VLA-EC (ppm)	400 ppm
Sweden	nivågränsvärde (NVG) (mg/m³)	350 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	150 ppm

Isopropyl alcohol (67-63-0)		
Sweden	kortidsvärde (KTV) (mg/m³)	600 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	250 ppm
United Kingdom	WEL TWA (mg/m³)	999 mg/m³
United Kingdom	WEL TWA (ppm)	400 ppm
United Kingdom	WEL STEL (mg/m³)	1250 mg/m³
United Kingdom	WEL STEL (ppm)	500 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m³)	245 mg/m³
Norway	Gjennomsnittsverdier (AN) (ppm)	100 ppm
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m3)	306.25 mg/m³
Norway	Gjennomsnittsverdier (Korttidsverdi) (ppm)	150 ppm
Switzerland	VME (mg/m³)	500 mg/m³
Switzerland	VME (ppm)	200 ppm
Switzerland	VLE (mg/m³)	1000 mg/m³
Switzerland	VLE (ppm)	400 ppm
Australia	TWA (mg/m³)	983 mg/m³
Australia	TWA (ppm)	400
Australia	STEL (mg/m³)	1230 mg/m³
Australia	STEL (ppm)	500 ppm
Canada (Quebec)	VECD (mg/m³)	1230 mg/m³
Canada (Quebec)	VECD (ppm)	500 ppm
Canada (Quebec)	VEMP (mg/m³)	985 mg/m³
Canada (Quebec)	VEMP (ppm)	400 ppm
USA - ACGIH	ACGIH TWA (ppm)	200 ppm
USA - ACGIH	ACGIH STEL (ppm)	400 ppm
USA - IDLH	US IDLH (ppm)	2000 ppm (10% LEL)
USA - NIOSH	NIOSH REL (TWA) (mg/m³)	980 mg/m³
USA - NIOSH	NIOSH REL (TWA) (ppm)	400 ppm
USA - NIOSH	NIOSH REL (STEL) (mg/m³)	1225 mg/m³
USA - NIOSH	NIOSH REL (STEL) (ppm)	500 ppm
USA - OSHA	OSHA PEL (TWA) (mg/m³)	980 mg/m³
USA - OSHA	OSHA PEL (TWA) (ppm)	400 ppm

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. In case of splash hazard: safety glasses.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

Other information : Do not eat, drink or smoke during use. Handle in accordance with good industrial hygiene and safety procedures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : White non woven cloth saturated with alcohol solution.

Colour : Colourless.

odour : Mild alcohol odour.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : -31.5 °C

Freezing point	:	No data available
Boiling point	:	80.2 °C
Flash point	:	68.5 °F Total organic carbon (TOC)
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Highly flammable liquid and vapour
Vapour pressure	:	33 mm Hg (at 20 °C)
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	0.8405 Specific Gravity
Relative gas density	:	2.1
Solubility	:	Not applicable.
Log Pow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use. Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Isopropyl alcohol (67-63-0)	
LD50 oral rat	4396 mg/kg
LD50 dermal rabbit	12800 mg/kg
LC50 inhalation rat (ppm)	16000 ppm (Exposure time: 8 h)
ATE CLP (oral)	4396.000 mg/kg bodyweight
ATE CLP (dermal)	12800.000 mg/kg bodyweight

Skin corrosion/irritation	:	Not classified Based on available data, the classification criteria are not met
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitisation	:	Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	:	Not classified Based on available data, the classification criteria are not met
Carcinogenicity	:	Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	:	Not classified Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Isopropyl alcohol (67-63-0)	
LC50 fishes 1	9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	> 1000 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)
LC50 fish 2	11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 other aquatic organisms 2	> 1000 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)

12.2. Persistence and degradability

Alcohol Prep Pads	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Alcohol Prep Pads	
Bioaccumulative potential	Not established.

Isopropyl alcohol (67-63-0)	
Log Pow	0.05 (at 25 °C)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

: Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

No dangerous good in sense of transport regulations

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

14.6.4. Inland waterway transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Contains no REACH candidate substance

Other information, restriction and prohibition regulations : Compliance with following regulations: Directive 1999/45/EC as amended. Directive 67/548/EEC as amended. Regulation (EC) 1272/2008 as amended. Regulation (EC) 1907/2006 as amended.

Seveso Information : No additional information available

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Sources of Key data : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Abbreviations and acronyms : ACGIH (American Conference of Governement Industrial Hygienists). ATE - acute toxicity estimate. CAS - Chemical Abstracts Service. CLP - Classification, Labelling and Packaging. CSR - Chemical Safety Report. EC - European Community. GHS - Globally Harmonised System. PBT - Persistent, Bioaccumulative and Toxic substance. REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals. SDS - Safety Data Sheet . STEL- Short-Term Exposure Limit . TLV- Threshold Limit Value. TWA- Time Weighted Average. vPvB - Very Persistent and Very Bioaccumulative.

Other information : None.

Full text of R-, H- and EUH-phrases:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	flammable liquids Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapour
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
R11	Highly flammable
R36	Irritating to eyes
R67	Vapours may cause drowsiness and dizziness
F	Highly flammable
Xi	Irritant

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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Toll-Free: 888.DYNAREX

Reviewed on 5/9/16

SAFETY DATA SHEET

SECTION 1. Product and Company Identification

PRODUCT NAME: Alcohol Preparation Pads/Swab

RECOMMENDED USE: Topical skin antiseptic

Product Code: AM-20200, 1113, 1114, 1116, PK-1114

Manufacturer's Name:	Dynarex Corporation
Manufacturer's Address:	10 Glenshaw Street Orangeburg, NY 10962
Emergency or Information Phone No.:	888-DYNAREX or 845-365-8200 At other times, contact the local Poison Control Center

SECTION 2. Hazards Identification

Physical hazards	Flammable solids	Category 1
Health hazards	Serious eye damage/eye irritation	Category 2A
Environmental hazards	Not determined.	
OSHA defined hazards	None additional.	

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Label elements

Signal word	Danger
Hazard statement	Flammable solid Causes serious eye irritation
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces – No smoking. Use only in a well-ventilated area.
Response	If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. In case of fire: use appropriate media to extinguish.
Storage	Store in a well-ventilated place.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise Classified (HNOC)	None known.

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Supplemental information

Main Hazards:
Highly flammable; irritation to eyes; vapor may cause drowsiness and dizziness

Absorption:
Eye contact; ingestion; inhalation; skin contact

Carcinogenic Status:
Not considered carcinogenic by NTP, IARC, and OSHA

Target Organs:
Central nerves system; skin; eye; liver; respiratory system

Health Effects:

Eyes
Liquid, mist or vapor will cause conjunctival irritation and possible corneal damage.

Skin
Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis. Liquid may be absorbed through the skin but not in toxicologically significant amounts, unless the contact area is large and under prolonged exposure.

Ingestion
Swallowing a small amount may have the effect of any of these symptoms: irritation of mouth, throat, digestive tract, and central nerves system depression.

A large dose may have the effect of any of these symptoms: dizziness, drowsiness, headache, mental confusion, nerve damage leading to numbness

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and muscle weakness, fall of blood pressure, liver damage, lung damage.

Inhalation
Exposure to vapor may have the effect of any of these symptoms: irritation of nose, throat and respiratory tract, central nerve system depression.

Exposure to vapor at high concentration may have the effects of any of these symptoms: dizziness, drowsiness, headache, mental confusion, lung damage, fall of blood pressure, liver damage, nerve damage leading to numbness and muscle weakness.

SECTION 3. Composition/information on Ingredients

Hazardous Ingredients (specific)	% Composition	CAS Number
Isopropyl Alcohol (2-Propanol)	70%	67-63-0
Inactive Ingredient		
Water	30%	7732-18-5

SECTION 4. First-aid measures

Eyes:
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin:
Immediately flood the affected skin area with large quantity of water, perferably under a shower. Remove contaminated clothing and continue washing. Contaminated clothing should be washed throughly before re-use. Obtain medical attention if blistering of the skin occures or redness persists.

Ingestion:
Do not induce vomiting. Have victim drink serval large glasses of water to dilute the stomach contents. Give the victim oxygen if he/she has difficulty in

breathing. Obtain medical attention immediately.

Inhalation:
Remove the victim from exposure immediately. Give the victim oxygen if he/she has difficulty in breathing. Obtain medical attention immediately.

MEDICAL PERSONNEL:
Monitor the victim for systemic secondary effects on liver and kidney functions. Support and treat as appropriate.

SECTION 5. Fire-fighting measures

Flash Point – 20°C/68°F

Boiling Point – 80°C/176°F

Extinguishing Media – Dry Chemical or Alcohol Type Foam, Carbon Dioxide

Be aware of the possibility of re-ignition. Keep containers and surroundings cool with water spray.

Unusual Fire and Explosion Hazards –
Class 3 Flammability. Vapor can travel a considerable distance to a source of ignition and flashback. Flashback can occur if air temperature exceeds flash point. Be aware the possibility of re-ignition.

Special Fire Fighting Procedures –
Handle as Flammable Liquid. Use Respiratory Protection. Wear full protective clothing for Fire Fighting Personnel.

SECTION 6. Accidental release measures

- Flush spills with water.

- Contain and absorb using soil, sand, or other inert material.
- Vapor can accummulate in low areas. Consider the need for evacuation.
- Prevent the material from entering drains or water courses.

SECTION 7. Handling and storage

- Eliminate all sources of ignition. Store away from heat.
- Store in well ventilated area.
- Handle as flammable liquid. Follow local, state and federal regulations.
- Avoid inhaling vapor. Avoid contact with eyes, skin and clothing.
- Wear eye protection if splashing is expected.
- Wear appropriate protective clothing.
- Use respirator if exposure level is high when handling bulk liquid.
- Keep container tightly closed when not in use.

SECTION 8. Exposure controls/personal protection

- OSHA Occupation Exposure Standards PEL 400ppm (980mg/m3) 8h TWA
- UK EH40: OES 400ppm (980mg/m3) 8h TWA
- UK EH40: OES 500ppm (1225mg/m3) 15min TWA
- ACGIH: TLV 200ppm (980mg/m3) 8h TWA
- ACGIH: STEL 400ppm (1225mg/m3) 15min TWA
- Personal Protective Equipment
    - Gloves
    - Eye
    - Clothing

SECTION 9. Physical and chemical properties

Appearance – Liquid Saturated Towelette / Pad / Swab

Color –	Clear
Odor –	Alcohol
Vapor Density –	2.1 (Air = 1)
Viscosity (cSt) –	2.9 cps at <@2> °C
Evaporation Rate –	Environmental Dependent
Water Solubility –	Complete
Specific Gravity –	0.8405

SECTION 10. Stability and reactivity

Stability –	Stable under normal conditions
Conditions to Avoid –	None
Incompatibility –	None
Hazardous Decomposition or By-product –	Oxides of carbon
Polymerization –	Will Not Occur.

SECTION 11. Toxicological information

Acute Toxicity

- Low level of acute toxicity predicted.
- May be harmful by skin absorption.
- Oral LD50 (rat) 5045mg/kg.
- Dermal LD50 (rabbit) 12800mg/kg.
- Inhalation LCLO (rat) 1600ppm 4h.

Chronic Toxicity / Carcinogenicity

- Material not expected to cause long-term adverse health effects.
- Material not classifiable as to its carcinogenicity to humans (Group 3).
- Chronic / Sub-chronic studies resulted in adverse effects to:

- Liver, spleen, biochemical effects, brain tissue degeneration, changes in reflex behavior, sensory nerve damage.

Genealogy Toxicity

- Material is not expected to cause any mutagenic effects.

Reproductive / Developmental Toxicity

- Material is not expected to cause reproductive or developmental health effects.
- Experimental studies in animals have provided some evidence of embryo / fetus toxicity and birth defects only at does producing marked maternal toxicity.

SECTION 12. Ecological information

- Mobility
- If released to soil, IPA is expected to have very high mobility
- Persistence / Degradability
- IPA is readily degraded in aerobic aqueous systems
- Bio-accumulation

- Low potential for bio-concentration in aquatic organisms

SECTION 13. Disposal considerations

- Transfer into suitable containers for recovery or disposal.
- Dispose in accordance with all applicable local and national regulations.
- Do not remove labels from container until the container has been cleaned.
- Do not cut, puncture or weld on or near the container.
- Do not incinerate closed containers.
- Empty containers may contain hazadous residues

SECTION 14. Transport information

US DOT Information:
Shipping Name: Not applicable
Hazard Class: Not applicable
UN/NA #: Not regulated per 49 CFR, Special Provision 47 (for rail and road transport in the USA)
Packing Group: Not applicable
Required Label(s): Not applicable
Additional Information: No additional information available

IATA Information:
Shipping Name: Not applicable
Hazard Class: Not applicable
UN#: Not regulated, as per IATA, Special Provision A46
Packing Group: Not applicable
Required Label(s): Not applicable
Additional information: Consult current IATA regulations prior to shipping by air

IMDG Information:
Shipping Name: Not applicable
Hazard Class: Not applicable
UN#: Not regulated, as per IMDG Code, Special Provision 216
Packing Group: Not applicable
Required Label(s): Not applicable
Additional information: No additional information available

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TDG Information:
Shipping Name: Not applicable
Hazard Class: Not applicable
UN#: Not regulated
Packing Group: Not applicable
Required Label(s): Not applicable
Additional information: No additional information available

SECTION 15. Regulatory information

This product is compliant with the following:

- EU Label: Classification and labeling have been performed according to EU Directive 67/548/EEC and 99/45/EC including amendments
- EU Hazard Symbol and Indication of Danger
- F – Highly flammable
- Xi – Irritant
- R11 – Highly flammable
- R36 – Irritating to eyes
- R67 – Vapors may cause drowsiness and dizziness
- S2 – Keep out of reach of children
- S7 – Keep container tightly closed
- S16 – Keep away from sources of ignition – No smoking
- S24 / S25 – Avoid contact with skin and eyes
- S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- US (Federal and State) Regulations and International Chemical Registration Laws TSCA listing
- This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Inventory

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- This product does not contain any chemicals subject to EPA Title III of the SARA Listing in Sections 302 and 304
- All ingredients in this product are listed on the European Inventory of Existing Commercial Chemical Substance (EINECS Listing) or are exempted from listing
- All ingredients in this product are listed on the Canada Domestic Substance List (DSL Listing)

SECTION 16. Other information

Disclaimer:
This Safety Data Sheet, which takes into consideration the requirements of Directive 76/768/EC and subsequent amendments and Directive 1999/45/EC plus subsequent amendments, has been prepared in accordance with Directive (EC) 1907/2006. It is believed to be correct and corresponds to the latest scientific/technical knowledge but all data, instructions, recommendations and/or suggestions are made without guarantee. No warranty, expressed or implied, is made and Dynarex Corp. assumes no legal responsibility or liability resulting from its use.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

1 Identification of the substance/mixture and of the supplier

1.1 Product identifier

Trade Name: Alconox
Synonyms:
Product number: Alconox

1.2 Application of the substance / the mixture : Cleaning material/Detergent

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer
Alconox, Inc.
30 Glenn Street
White Plains, NY 10603
1-914-948-4040

Supplier
Not Applicable

Emergency telephone number:
ChemTel Inc
North America: 1-800-255-3924
International: 01-813-248-0585

2 Hazards identification

2.1 Classification of the substance or mixture:

In compliance with EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments.

Hazard-determining components of labeling:
Tetrasodium Pyrophosphate
Sodium tripolyphosphate
Sodium Alkylbenzene Sulfonate

2.2 Label elements:

Skin irritation, category 2.
Eye irritation, category 2A.

Hazard pictograms:

Signal word: Warning

Hazard statements:
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P501 Dispose of contents and container as instructed in Section 13.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

Additional information: None.

Hazard description

Hazards Not Otherwise Classified (HNOC): None

Information concerning particular hazards for humans and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

3 Composition/information on ingredients

3.1 Chemical characterization : None

3.2 Description : None

3.3 Hazardous components (percentages by weight)

Identification	Chemical Name	Classification	Wt. %
CAS number: 7758-29-4	Sodium tripolyphosphate	Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	12-28
CAS number: 68081-81-2	Sodium Alkylbenzene Sulfonate	Acute Tox. 4; H303 Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	8-22
CAS number: 7722-88-5	Tetrasodium Pyrophosphate	Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	2-16

3.4 Additional Information : None.

4 First aid measures

4.1 Description of first aid measures

General information: None.

After inhalation:

Maintain an unobstructed airway.

Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:

Wash affected area with soap and water.

Seek medical attention if symptoms develop or persist.

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.

Remove contact lens(es) if able to do so during rinsing.

Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly.

Seek medical attention if irritation, discomfort, or vomiting persists.

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4.2 Most important symptoms and effects, both acute and delayed

None

4.3 Indication of any immediate medical attention and special treatment needed:

No additional information.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

For safety reasons unsuitable extinguishing agents : None

5.2 Special hazards arising from the substance or mixture :

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

Protective equipment:

Wear protective eye wear, gloves and clothing.
Refer to Section 8.

5.4 Additional information :

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols.
Avoid contact with skin, eyes and clothing.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures :

Ensure adequate ventilation.
Ensure air handling systems are operational.

6.2 Environmental precautions :

Should not be released into the environment.
Prevent from reaching drains, sewer or waterway.

6.3 Methods and material for containment and cleaning up :

Wear protective eye wear, gloves and clothing.

6.4 Reference to other sections : None

7 Handling and storage

7.1 Precautions for safe handling :

Avoid breathing mist or vapor.
Do not eat, drink, smoke or use personal products when handling chemical substances.

7.2 Conditions for safe storage, including any incompatibilities :

Store in a cool, well-ventilated area.

7.3 Specific end use(s):

No additional information.

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8 Exposure controls/personal protection

8.1 Control parameters :

7722-88-5, Tetrasodium Pyrophosphate, OSHA TWA 5 mg/m3.

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory protection:

Not needed under normal conditions.

Protection of skin:

Select glove material impermeable and resistant to the substance.

Eye protection:

Safety goggles or glasses, or appropriate eye protection.

General hygienic measures:

Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.

9 Physical and chemical properties

Appearance (physical state, color):	White and cream colored flakes - powder	**Explosion limit lower:** **Explosion limit upper:**	Not determined or not available. Not determined or not available.
Odor:	Not determined or not available.	**Vapor pressure at 20°C:**	Not determined or not available.
Odor threshold:	Not determined or not available.	**Vapor density:**	Not determined or not available.
pH-value:	9.5 (aqueous solution)	**Relative density:**	Not determined or not available.
Melting/Freezing point:	Not determined or not available.	**Solubilities:**	Not determined or not available.
Boiling point/Boiling range:	Not determined or not available.	**Partition coefficient (n-octanol/water):**	Not determined or not available.
Flash point (closed cup):	Not determined or not available.	**Auto/Self-ignition temperature:**	Not determined or not available.
Evaporation rate:	Not determined or not available.	**Decomposition temperature:**	Not determined or not available.

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Flammability (solid, gaseous):	Not determined or not available.	**Viscosity**:	a. Kinematic: Not determined or not available. b. Dynamic: Not determined or not available.
Density at 20°C:	Not determined or not available.		

10 Stability and reactivity

10.1 Reactivity : None

10.2 Chemical stability : None

10.3 Possibility hazardous reactions : None

10.4 Conditions to avoid : None

10.5 Incompatible materials : None

10.6 Hazardous decomposition products : None

11 Toxicological information

11.1 Information on toxicological effects :

Acute Toxicity:

Oral:

: LD50 > 5000 mg/kg oral rat - Product .

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Sodium Alkylbenzene Sulfonate: Causes skin irritation. .

Serious eye damage/irritation:

Sodium Alkylbenzene Sulfonate: Causes serious eye irritation .

Tetrasodium Pyrophosphate: Rabbit - Risk of serious damage to eyes .

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

IARC (International Agency for Research on Cancer): None of the ingredients are listed.

NTP (National Toxicology Program): None of the ingredients are listed.

Germ cell mutagenicity: No additional information.

Reproductive toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

12 Ecological information

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12.1 Toxicity:

Sodium Alkylbenzene Sulfonate: Fish, LC50 1.67 mg/l, 96 hours.
Sodium Alkylbenzene Sulfonate: Aquatic invertebrates, EC50 Daphnia 2.4 mg/l, 48 hours.
Sodium Alkylbenzene Sulfonate: Aquatic Plants, EC50 Algae 29 mg/l, 96 hours.
Tetrasodium Pyrophosphate: Fish, LC50 - other fish - 1,380 mg/l - 96 h.
Tetrasodium Pyrophosphate: Aquatic invertebrates, EC50 - Daphnia magna (Water flea) - 391 mg/l - 48 h.

12.2 Persistence and degradability: No additional information.

12.3 Bioaccumulative potential: No additional information.

12.4 Mobility in soil: No additional information.

General notes: No additional information.

12.5 Results of PBT and vPvB assessment:

PBT: No additional information.

vPvB: No additional information.

12.6 Other adverse effects: No additional information.

13 Disposal considerations

13.1 Waste treatment methods (consult local, regional and national authorities for proper disposal)

Relevant Information:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities. (US 40CFR262.11).

14 Transport information

14.1 UN Number: None
ADR, ADN, DOT, IMDG, IATA

14.2 UN Proper shipping name: None
ADR, ADN, DOT, IMDG, IATA

14.3 Transport hazard classes:
ADR, ADN, DOT, IMDG, IATA

Class: None
Label: None
LTD. QTY: None

US DOT
Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.

Non Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.

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Trade Name: Alconox

	Comments: None	**Comments:** None
14.4	**Packing group:** ADR, ADN, DOT, IMDG, IATA	None
14.5	**Environmental hazards** :	None
14.6	**Special precautions for user:**	None
	Danger code (Kemler):	None
	EMS number:	None
	Segregation groups:	None
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.	
14.8	**Transport/Additional information:**	
	Transport category:	None
	Tunnel restriction code:	None
	UN "Model Regulation":	None

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

North American

SARA

Section 313 (specific toxic chemical listings): None of the ingredients are listed.
Section 302 (extremely hazardous substances): None of the ingredients are listed.

CERCLA (Comprehensive Environmental Response, Clean up and Liability Act) Reportable

Spill Quantity: None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

Inventory: All ingredients are listed.
Rules and Orders: Not applicable.

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Canadian

Canadian Domestic Substances List (DSL):
All ingredients are listed.

EU

REACH Article 57 (SVHC): None of the ingredients are listed.

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Germany MAK: Not classified.

Asia Pacific

Australia

Australian Inventory of Chemical Substances (AICS): All ingredients are listed.

China

Inventory of Existing Chemical Substances in China (IECSC): All ingredients are listed.

Japan

Inventory of Existing and New Chemical Substances (ENCS): All ingredients are listed.

Korea

Existing Chemicals List (ECL): All ingredients are listed.

New Zealand

New Zealand Inventory of Chemicals (NZOIC): All ingredients are listed.

Philippines

Philippine Inventory of Chemicals and Chemical Substances (PICCS): All ingredients are listed.

Taiwan

Taiwan Chemical Substance Inventory (TSCI): All ingredients are listed.

16 Other information

Abbreviations and Acronyms: None

Summary of Phrases

Hazard statements:

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P501 Dispose of contents and container as instructed in Section 13.

Manufacturer Statement:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

NFPA: 1-0-0

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Effective date: 12.08.2015 **Revision** : 12.10.2015

Trade Name: Alconox

HMIS: 1-0-0

iLOVETOCREATE®
A DUNCAN ENTERPRISES COMPANY

Safety Data Sheet

1. COMPANY AND PRODUCT IDENTIFICATION

iLoveToCreate
A Duncan Enterprises Company
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
559-291-9444 (Fax)
www.ilovetocreate.com

EMERGENCY TELEPHONE NUMBERS
Health Emergencies:
559-291-4444 7:00 am – 3:30 pm Pacific Std. Time
Spill and Off-Hour Health Emergencies:
800-424-9300 U.S. and Canada
703-527-3887 Outside U.S. and Canada (Collect)

Product Name: Aleene's Original Tacky Glue

2oz-15600
8oz-15599
16oz-15601
8oz-15606
16oz-15607
128oz-15611
3pk-25804
2/3oz-24355
3oz tube-21372
Brush on-21704
64oz-33611

Product Description/Use: Adhesive
Restrictions On Use: None known

2. HAZARDS IDENTIFICATION

Emergency Overview: Not classified. Read entire Safety Data Sheet.

Hazard Class	None
Hazard Category	None
Pictograms	None
Precautionary Statements	
Prevention	Not prescribed
Response	Not prescribed
Storage	Not prescribed
Disposal	Not prescribed

Classification complies with OSHA Hazard Communication Standart (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally harmonized System of Classification and Labelin of Chemicals (GHS).

See section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Detailed formualtion is submitted by the client and it is proprietary information.
Products are made by physical manipulation and chemical reaction from the ingredients. These ingredient chemicals may not exist as its original formula in final products. None of these ingredients are hazardous substances.

Hazardous Components	CAS Number	%
None	None	None

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If symptoms develop and persist, seek medical attention.
Skin Contact:	Wash with soap. If symptoms develop and persist, get medical attention. Wash affected area immediately with soap and water. Remove contaminated clothing and footwear. If symptoms develop and persist, see medical attention.
Eye Contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms develop and persist, get medical attention.
Ingestion:	If material is ingested, immediately contact a physicialn or poison control center. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Notes to Physician:	Treat symptomatically and supportively.
Symptoms:	See section 11.

5. FIRE FIGHTING MEASURES

Extinguishing Media:	Water spray (fog), foam, dry chemical or carbon dioxide. Use extinguishing measures appropriate for local circumstances and the surrounding environment.
Special Firefighting Procedures:	Wear self-containted breathing apparatus. Do not breathe combustion gases.
Unusualy fire or explosion hazards:	This product is a aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a moderate fire hazard. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustions products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weught hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.	
Environmental precautions:	Prevent further leakage or spillage if safe to do so. Prevent contamination of soil and water.
Clean-Up methods:	Keep unnecessary personnel away. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Small spills can be absorbed with vermiculite, clay or other suitable non-biodegradable absorbent material, scooped up and placed in containers. For large spills dike ahead and collect liquid. Dispose of contaminated material as waste according to Section 13.

7. HANDLING AND STORAGE

Handling:	Wash thoroughly after handling. Use only with adequate ventilation. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Keep container closed. Do not breathe gas/fumes/vapor/spray.
Storage:	For safe storage, store between 5° C (41°F) and 37°C (98° F). Keep the container tightly closed and in a cool, well ventilated place. Protect from freezing.
For information on product shelf life, please review labels on container or check the Technical Data Sheet.	

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.	
Hazardous Components:	None
ACGIH TLV:	None
OSHA PEL:	None
AIHA WEEL:	None
OTHER:	None
Engineering Controls:	Work should be done in an adequately ventilated area (i.e., ventilation sufficient to maintain concentrations below one half of the PEL and other relevant standards). Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.
Respiratory Protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respirator use (29 CFR 1910.134).
Eye/Face Protection:	Wear safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of producrt exists.
Skin Protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	White
Odor:	Slight
Odor Threshold:	Not available.
pH:	4.5
Vapor Pressure:	Not determined.
Boiling Point/Range:	100.0° C (212°F) Approximately
Melting Point/Range:	< 5°C (<41°F) (Freezing Point)
Specific gravity:	1.08
Vapor Density:	Not determined.
Flash Point:	No flash point up to 100°C. Aqueous preparation.
Flammable/Explosive Limits – Lower:	Not available.
Flammable/Explosive Limits – Upper:	Not available.
Autoignition temperature:	Not applicable.
Evaporation rate:	Not determined.
Solubility in water:	Miscible
Partition coefficient (n-octanol/water):	Not determined.
VOC content:	Not available.
Viscocity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Oxides of Carbon. Thermal decomposition can lead to release of irritating gases and vapors.
Incompatible materials:	This product may react with strong oxidizing agents.
Conditions to Avoid:	Freezing conditions.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure	Skin, inhalation, eyes.
Potential Health Effects/Sympotoms	
Inhalation:	Inhalation of vapors of mists of the product may be irritating to the respiratory system.
Skin Contact:	No skin irritation can be expected from single short-term exposure to this product. Prolonged or repeated contact may produce some irritation.
Eye Contact:	May cause slight irritation to eyes on contact.
Ingestion:	May cause gastrointesticnal tract irritation if swallowed. Not expected under normal conditions of use.

Hazardous Components	**NTP Carcinogen**	**IARC Carcinogen**	**OSHA Carcinogen (Specifically Regulated)**
None	None	None	None
Hazardous Components		**Health Effects/Target Organs**	
None		None	

12. ECOLOGICAL INFORMATION

Ecological information: No data available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Legal disposition of wastes is the responsibility of the owner/generator of the waste. Applicable federal, state and/or local regulation must be followed during treatment, storage, or disposal of waste containing this product.
Hazardous waste number:	To the best of our knowledge, this product is not listed nor does it meet the criteria of a hazardous waste if discarded in its purchased form. However, under RCRA, it is the responsibility of the user to determine at the time of disposal whether a product meets any of the RCRA hazardous waste criteria. This is because product uses, transformation, mixtures, processes, etc., may render the resulting material hazardous, under the criteria ignitability, corrosively, reactivity and toxicity characteristics under the new Toxicity Characteristics Leaching Procedure (TCLP) 40 Code of Federal Regulations 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)	
Proper shipping name:	**Not regulated.**
Hazard class or division:	**None**
Identification number:	**None**
Packing group:	**None**
International Air Transportation (ICAO/IATA	
Proper shipping name:	**Not regulated.**
Hazard class or division:	**None**
Identification number:	**None**
Packing group:	**None**

Water Transportation (INO/IMDG)	
Proper shipping name:	**Not regulated.**
Hazard class or division:	**None**
Identification number:	**None**
Packing group:	**None**

15. REGULATORY INFORMATION

United States Regulatory Information	
TSCA 8 (b) Inventory Status:	All components are listed or are exempt from the listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification:	None above reporting de minimus.
CERCLA/SARA Section 302 EHS:	None above reporting de minimus.
CERCLA/SARA Section 311/312:	Immediate Health
CERCLA/SARA 313	None above reporting de minimus.
California Proposition 65:	This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Canada Regulatory Information	
CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class:	Not Controlled

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous versions in sections: New information added in Section(s): 15

Disclaimer: The data contained herein are furnished for information only and are believed to be reliable. We do not assume responsibility for any results obtained by persons over whose methods whom we have no control. It is the user's responsibility to determine the suitability of the product(s) mentioned above or any productions methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of these products. In light of the foregoing specifically disclaimed all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of the products mentioned in this document. Further disclaims all liability for consequential or incidental damages of any kind, including lost profits.

Date Issued:4/30/2013

END SAFETY DATA SHEET

Date Issued	Revision Date	Version
April 30, 2013	Sept. 2, 2014	2
	December 30, 2015	3

Safety Data Sheet

1. COMPANY AND PRODUCT IDENTIFICATION

iLoveToCreate
A Duncan Enterprises Company
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
559-291-9444 (Fax)
www.ilovetocreate.com

EMERGENCY TELEPHONE NUMBERS
Health Emergencies:
559-291-4444 7:00 am – 3:30 pm Pacific Std. Time
Spill and Off-Hour Health Emergencies:
800-424-9300 U.S. and Canada
703-527-3887 Outside U.S. and Canada (Collect)

Product Name: Aleene's Quick Dry Tacky Glue
Product Use/Description: Water-based adhesive
Restrictions on use: None known.

2. HAZARDS IDENTIFICATION

Classification:	This mixture does not meet the criteria for classification.
Hazard Statement:	None.
Other Hazards:	Not hazardous
Signal Word:	No data.
Precautionary Statement:	Observe good industrial hygiene practices.
Pictogram(s) by GHS:	None.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Detailed formulation is submitted by the client and it is proprietary information.
Products are made by physical manipulation and chemical reaction from the ingredients. These ingredient chemicals may not exist as its original formula in final products. None of these ingredients are hazardous substances.
Reportable ingredients (if applicable): None listed.

4. FIRST AID MEASURES

General Advice:	
On Inhalation:	Health injuries are not known or expected under normal use.
On Skin Contact:	Health injuries are not known or expected under normal use.
On Eye Contact:	Direct contact with eyes may cause temporary irritation.
On Ingestion:	Health injuries are not known or expected under normal use.
Acute/Delayed Symptoms:	None
Medical Advice:	Treat symptomatically and supportively.
Symptoms /Effects:	See section 11.
Special Treatment Needed:	None.

5. FIRE FIGHTING MEASURES

Extinguishing Media	
Suitable extinguishing media:	Use fire-extinguisher media appropriate for surrounding materials.
Unsuitable extinguishing media:	None.
Protection of Firefighters	

Specific hazards arising from the chemical:	This product is an aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a moderate fire hazard. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat.
Protective equipment for firefighters:	No special precautions.
Special precautions for fire fighters:	No special precautions.
Will hazardous combustion occur?:	Carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	No special precautions.
Environmental Precautions:	Avoid discharge into drains, water courses or on to the ground.
Methods for Cleaning Up:	Absorb spillage with suitable absorbent material. Clean up in accordance with all applicable regulations.
Emergency Procedures:	None listed.
Recommended Personal Protective Equipment:	See section 8.

7. HANDLING AND STORAGE

Safe Storage:	Store in closed original container in a dry place. Store away from incompatible materials. Storage temperature: 40°F and 100°F. Protect from freezing.
Safe Handling:	No specific usage precautions noted.
Known Incompatibilities:	None known.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Occupational Exposure Limits: No exposure limits noted for ingredient(s).
Appropriate Engineering Controls: No specific hygiene procedures noted but well personal hygiene practices are always advisable, especially when working with chemicals.

Individual Protection measures, such as PPE (Personal Protective Equipment):

Personal Protection Equipment:	
Respiratory Protection:	Under normal conditions, respirator is not normally required.
Eye Protection:	Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.
Hand Protection:	No special precautions.
Skin Protection:	No special precautions.
Thermal Protection:	None.
General Safety and Hygiene Measures:	No special requirements.
Further Information:	None.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:	Liquid
Color:	White
Odor:	Slightly sweet.
Odor Threshold:	Not available.
pH:	4 – 6.
Boiling Point/Range:	>212°F (>100°C)
Melting Point/Range:	32°F (0°C) Approx.
Flash Point:	>212°F (>100°C)
Evaporation Rate:	1 Water=1

Vapor Density:	0.62 (Air=1)
Solubility(ies):	Soluble.
Vapor Pressure:	17.5 mm Hg at 20°C
Relative Density:	No data.
Viscosity:	No data.
Partition Coefficient (n-octanol/water), if applicable:	Not available.
Explosive Properties:	No data.
Flammability: (Solid, gas)	Not available.
Flammability Limit in Air: Upper/Lower	Not available.
Autoignition temperature:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat and direct sunlight.
Incompatible Materials:	Strong oxidizing agents. Alkalies.
Hazardous Decomposition Products:	Carbon oxides.
Possibility of Hazardous Reactions:	Will not occur.
Reactivity:	Will not occur.
Hazardous polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Delayed or Immediate effects:	None known.
Germ Cell Mutagenicity:	None known.
Specific target organ toxicity (single exposure):	None known.
Specific target organ toxicity (repeated exposure):	None known.
Chemicals listed on NTP, IARC or OSHA as a Carcinogen?:	None known.

Chemical Name:	Oral LD50	Dermal LD50	Inhalation LC50	Percentage
None	X	X	X	X

***Estimates for product may be based on additional component data not shown.**

12. ECOLOGICAL INFORMATION (NON-MANDATORY)

Ecotoxicity:	Not expected to be harmful to aquatic organisms.
Persistence and degradability:	No data available.
Bioaccumulative potential:	No data available.
Aquatic / Terrestrial warnings:	No data.
Mobility in soil:	The product is insoluble in water and will sediment in water systems.
Other adverse effects:	None known.

13. DISPOSAL CONSIDERATIONS (NON-MANDATORY)

Disposal instructions:	Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Do not discharge into drains, water courses or onto the ground.

Local disposal regulations:	No data.
Hazardous waste code:	No data.
Contaminated packaging:	No data.
Waste residues:	No data.

14. TRANSPORTATION INFORMATION (NON-MANDATORY)

	DOT	IMDG	IATA
UN/ID number:	Not regulated as dangerous goods.	Not regulated as dangerous goods.	Not regulated as dangerous goods.
Proper shipping name:	X	X	X
Transport hazard class:	X	X	X
Packing group (if applicable):	X	X	X
Environmental Provisions:	X	X	X
Special Precautions:	X	X	X
Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code			
Emergency Response Guide Number:		**EmS-No:**	**None**

Pictograms

US:	IATA; IMDG:	Marine Pollutant:
None	None	None

15. REGULATORY INFORMATION (NON-MANDATORY)

US Federal Regulations:	
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):	Not regulated.
CERCLA (Superfund) reportable quantity (lbs.) (40 CFR 302.4)	None
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):	None
Hazard Categories:	
Immediate Hazard:	No
Delayed Hazard:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactivity Hazard:	No
Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):	No

Chemical Name:	CAS Number:	Reportable Quantity:	Threshold planning quantity:	Threshold planning quantity, lower value:	Threshold planning quantity, upper value:
None	X	X	X	X	X

Superfund Amendments and Reauthorization Act of 1986 (SARA)			
SARA 304 Emergency release notification:	None		
SARA 311/312 (40 CFR 370) Hazardous Chemical:	None		
SARA 313 (TRI reporting):	Chemical Name: None	CAS Number: N/A	% by wt. N/A
Drug Enforcement Administration (DEA) (21 CFR 1308.11-15):	Not controlled.		

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (Haps) List:	No data.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):	No data.
Safe Drinking Water Act (SDWA):	No data.
Canadian Domestic Substances List (DSL):	No data.

State Regulations	
TSCA:	This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S. C. 2601 et. Seq.
FDA:	21 CFR 175.105
SARA/Title III:	This product does not contain any substances at or above the reported threshold under Section 313, based on available data.
Conforms to Non-Toxic ASTM-4236:	Products are certified in a program of toxicological evaluation by a nationally recognized toxicologist to contain no materials in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems. These products are certified to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D-4236. In addition, there is no physical hazard as defined within 29 CFR Part 1910.1200(c).
California Proposition 65 Warning:	This product contains the following chemicals that are known to the State of California to cause cancer, birth defects, or other reproductive harm: **None**
HMIS III Rating:	No data.
Unless a concentration is specified in Section 2 of the SDS, the above chemicals(s) are present in trace amounts.	

***A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).**

16. OTHER INFORMATION

These recommendations and information contained in this MSDS have been compiled from sources believed to represent the most current information available when the MSDS was prepared. However, the manufacturer / distributor of this product does not provide any warranty, guaranty of representation as to the correctness or sufficient of this information. If this material is used in large amounts and/or an unusual manner, the user is obliged to determine what safety measures are appropriate, including the applicable and relevant workplace and environmental regulations pertaining to handling, use and disposal.

Creation Date:	Version: 2	Revision date:
8/8/2011	1	
	2	3/7/16-JL

Table of Abbreviations			
ACGIH:	American Conference of Governmental Industrial Hygienists	**LD:**	Lethal Dose
ANSI:	American National Standards Institute	**MARPOL:**	Marine Pollution
ASTM:	American Society for Testing Materials	**mg / kg:**	Milligram per Kilogram
°C:	Degrees Centigrade	**mm:**	Millimeter
CAA:	Clean Air Act	**MSHA:**	Mine Safety and Health Administration
CAS:	Chemical Abstract Service	**N/A:**	Not Applicable
CERCLA:	Comprehensive Environmental Response, Compensation & Liability Act	**NFPA:**	National Fire Protections Association
CFR:	Code of Federal Regulations	**NIOSH:**	National Institute for Occupational Safety and Health
CPR:	Controlled Products Regulations	**NTP**	National Toxicology Program
DEA:	Drug Enforcement Act	**OEL:**	Over Exposure Limit
DOT:	Department of Transportation	**OSHA:**	Occupational Safety and Health Administration
DSL:	Canadian Domestic Substances List	**PEL:**	Permissible Exposure Limits
EmS:	Emergency Medical Goods Services	**ppm**	Parts Per Million
EPA:	Environmental Protection Agency	**SARA**	Superfund Amendment and Reauthorization Act
°F:	Degrees Fahrenheit	**STEL**	Short-Term Exposure Limit
FDA:	Food & Drug Administration	**SDS:**	Safety Data Sheet
g/l:	Grams per Liter	**SDWA:**	Safe Drinking Water Act
HAPs:	Hazardous Air Pollutants	**TLV:**	Threshold Limit Value
Hg:	Mercury	**TRI:**	Toxics Release Inventory
HMIS:	Hazardous Materials Identification System	**TSCA**	Toxic Substances Control Act
HNOC:	Hazard(s) Not otherwise classified	**TWA**	Time – Weighted Average
IARC:	International Agency for Research on Cancer	**U.N.**	United Nations
IATA:	International Air Transport Association	**WHMIS**	Workplace Hazardous Materials Information System
ID:	Identification / Identity	**>**	Greater Than
IDLH:	Immediate Danger to Life or Health	**<**	Less Than
IMDG:	International Maritime Dangerous Goods	**73/78:**	1973 & 1978
LC:	Lethal Concentration		

END SAFETY DATA SHEET

Safety Data Sheet

Alizarin Yellow R Solution, 0.1%

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Alizarin Yellow R Solution, 0.1%

Synonyms/Generic Names: Mordant Orange 1; 2-Hydroxy-5-[(4-nitrophenyl)azo]benzoic acid; 5-(4-Nitrophenylazo)salicylic acid

SDS Number: 18.10

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: No known OSHA hazards.

Target Organs: None

Signal Word: None

Pictograms: None

GHS Classification:

None	

GHS Label Elements, including precautionary statements:

Hazard Statements:

None	

Precautionary Statements:

None	

Potential Health Effects

Eyes	May cause eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	0
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	0
Fire	0
Reactivity	0
Personal	A

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Alizarin Yellow R	<1	2243-76-7	218-818-3	$C_{13}H_9N_3O_5$	287.23 g/mol
Water	Balance	7732-18-5	231-791-2	H_2O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with water for at least 15 minutes.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.
Skin	Flush with plenty of water and wash using soap.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides, nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities
Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Yellow/brown, translucent liquid.
Odor	Not Available
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	1.0005 g/cm^3 (water = 1)
Solubility (ies)	Not Available
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Not Available
Incompatible Materials	Oxidizing agents.
Hazardous Decomposition Products	Carbon oxides, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation.
Eyes	Irritation.
Respiratory	Irritation.
Ingestion	Irritation.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product containers.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	No SARA Hazards
SARA 312	No SARA Hazards
SARA 313	Not Listed
WHMIS Canada	Not Listed

16. OTHER INFORMATION

Revision	Date
Revision 1	01/08/2013
Revision 2	06/19/2013

Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Creation Date 29-Sep-2009 **Revision Date** 10-Nov-2014 **Revision Number** 1

1. Identification

Product Name Alumina (Activated/Adsorption/Dry Powder/Acid/Basic/Neutral/Polishing Gamal)

Cat No. : A446-100, A447-500, A505-212, A540-3, A540-500, A591-3, A591-500, A620-500, A634-3, A941-500, A948-500, A950-500, B365-250, C218-3, P467R, P477, S716842

Synonyms Aluminum oxide; Alundum; morin dyed

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification
Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Based on available data, the classification criteria are not met

Label Elements
None required

Hazards not otherwise classified (HNOC)
None identified

3. Composition / Information on Ingredients

Component	CAS-No	Weight %
Aluminum oxide	1344-28-1	100

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
Ingestion	Do not induce vomiting. Obtain medical attention.
Most important symptoms/effects	No information available.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media	No information available
Flash Point	Not applicable
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products
None known
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
1	0	1	N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.
Environmental Precautions	See Section 12 for additional ecological information.
Methods for Containment and Clean Up	Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and storage

Handling	Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Aluminum oxide	TWA: 1 mg/m³	(Vacated) TWA: 10 mg/m³ (Vacated) TWA: 5 mg/m³ TWA: 15 mg/m³ TWA: 5 mg/m³	

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Aluminum oxide	TWA: 10 mg/m³	TWA: 10 mg/m³	TWA: 1 mg/m³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration

Engineering Measures Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	2000 °C / 3632 °F
Boiling Point/Range	2980 °C / 5396 °F
Flash Point	Not applicable
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	negligible
Vapor Density	No information available
Relative Density	4.0 (H2O=1)
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	Al2O3
Molecular Weight	101.96

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions. Hygroscopic.

Conditions to Avoid Incompatible products.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products None under normal use conditions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminum oxide	> 5000 mg/kg (Rat) (OECD Guideline 401)	Not listed	> 2.3 mg/l 4 h (OECD Guideline 403)

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Aluminum oxide	1344-28-1	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport Information

DOT Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory Information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Aluminum oxide	X	X	-	215-691-6	-		X	X	X	X	X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Aluminum oxide	1344-28-1	100	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know Not applicable

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Aluminum oxide	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class Non-controlled

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 29-Sep-2009
Revision Date 10-Nov-2014
Print Date 10-Nov-2014
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS

FLINN SCIENTIFIC

SDS #: 34
Revision Date: June 29, 2015

Aluminum Safety Data Sheet (SDS)

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Aluminum

Signal Word
N/A

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
Chemtrec Emergency Phone Number: (800) 424-9372

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Aluminum (/link/3e3b2d18f049434fbf3ac5a911d24370.aspx) Buy Now (/link/3e3b2d18f049434fbf3ac5a911d24370.aspx)	7429-90-5	Al	26.98	

Synonyms: Aluminum foil, strips, wire, sheet

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Aluminum, as dust, is a flammable solid.
Powder Autoignition Temperature: 760 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a class D fire extinguisher or dry sand for extinction (P370+P378). Never use water.

NFPA Code
H-0
F-3
R-1

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Contain spill. Add sand or absorbent material to the zinc dust. Gather mixture and deposit in sealed bag or container. Dispose of bag or container. Wash spill site only after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, eye protection, and face protection (P280). Wash hands thoroughly after handling.
Exposure guidelines: (as total dust) PEL 15 mg/m^3 (OSHA); (as respirable fraction) TLV 1 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Silvery solid. Odorless.
Insoluble in water. Heat is generated when fine powder and dust are mixed with water.

Boiling point: 2467 °C
Melting point: 660 °C
Specific gravity: 2.70

SECTION 10 — STABILITY AND REACTIVITY

Contact with acids liberates flammable hydrogen gas. Contact with water generates heat.
Avoid contact with acids, acid chlorides, oxidizers, and halogens.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: Pneumoconiosis
Target organs: Lungs

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option. Do not allow aluminum dust to become wet. See Section 6 for further information.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not dangerous good

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-072-3)

SECTION 16 — OTHER INFORMATION

N.A. = Not available, not all health aspects of this substance have been fully investigated.
N/A = Not applicable

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: June 29, 2015

Section 1 Chemical Product and Company Identification

5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catherines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**ALUMINUM METAL POWDER**
Synonyms	Aluminum ; Aluminum Metal ; Aluminum Powder

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS02
Target organs: Eyes, Skin, Respiratory system

GHS Classification:
Flammable solid (Category 1)
Water reactive (Category 2)

GHS Label information: **Hazard statement:**
H228: Flammable solid.
H261: In contact with water releases flammable gas.

Precautionary statement:
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P223: Keep container tightly closed.
P231+P232: Handle under inert gas. Protect from moisture.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P335+P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P370+P378: In case of fire: Use DRY SAND ONLY to extinguish.
P402+P404: Store in a dry place. Store in a closed container.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Combustible dust
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Aluminum	7429-90-5	>99.5%	231-072-3

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: DRY SAND ONLY!

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Powders form explosive mixtures with air which may be ignited by a spark. .

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for reuse if not contaminated. Remove all sources of ignition. Use non-sparking tools. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources. Avoid exposure to water and moisture.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Aluminum metal and insoluble compounds	TWA: 1(R) mg/m^3(A4)	TWA: 15 mg/m^3 Total dust	TWA: 10 mg/m^3 Total dust

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. Silvery-gray metallic powder
Odor: No odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: 657°C (1215°F)
Boiling point: Not applicable
Flash point: Data not available

Evaporation rate (= 1): Not applicable
Flammability (solid/gas): Flammable solid
Explosion limits: Lower: 40 mg/L **Upper:** Not available
Vapor pressure (mm Hg): Data not available
Vapor density (Air = 1): Data not available
Relative density (Specific gravity): 2.7
Solubility(ies): Insoluble in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Al
Molecular weight: 26.98

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons, and water.

Hazardous decomposition products: Reacts with water, acids or alkalies to generate hydrogen gas.

Section 11 Toxicological Information

Acute toxicity: Data not available
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC classified: Group 1: Carcinogenic to humans (production).
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: It has been reported that chronic exposure has been suspected of causing lung injury.
Ingestion: May be harmful if ingested.
Skin: Contact with skin may cause irritaiton.
Eyes: Contact with eyes may cause irritation and corneal abrasions.
Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: BD0330000

Section 12 Ecological Information

Toxicity to fish: No data available
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN1396 **Shipping name:** Aluminum powder, uncoated
Hazard class: 4.3 **Packing group:** II **Reportable Quantity:** No **Marine pollutant:** No
Exceptions: Limited quantity equal to or less than 0.5 Kg (1.1 lb) **2016 ERG Guide #** 138

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Aluminum	Listed	Not listed	D001 (dust only)	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Section 1 Chemical Product and Company Information

Aldon Corporation
221 Rochester Street
Avon, NY 14414
(585) 226-6177

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product	**ALUMINUM METAL POWDER**
Synonyms	Aluminum ; Aluminum Metal ; Aluminum Powder

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS02
Target organs: Eyes, Skin, Respiratory system

GHS Classification:
Flammable solid (Category 1)
Water reactive (Category 2)

GHS Label information: Hazard statement:
H228: Flammable solid.
H261: In contact with water releases flammable gas.

Precautionary statement:
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P223: Keep container tightly closed.
P231+P232: Handle under inert gas. Protect from moisture.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P335+P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P370+P378: In case of fire: Use DRY SAND ONLY to extinguish.
P402+P404: Store in a dry place. Store in a closed container.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Aluminum	7429-90-5	>99.5%	231-072-3

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: DRY SAND ONLY!

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Powders form explosive mixtures with air which may be ignited by a spark. .

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for reuse if not contaminated. Remove all sources of ignition. Use non-sparking tools. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources. Avoid exposure to water and moisture.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Aluminum metal and insoluble compounds	TWA: 1(R) mg/m^3(A4)	TWA: 15 mg/m^3 Total dust	TWA: 10 mg/m^3 Total dust

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. Silvery-gray metallic powder
Odor: No odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: 657°C (1215°F)
Boiling point: Not applicable
Flash point: Data not available

Evaporation rate (= 1): Not applicable
Flammability (solid/gas): Flammable solid
Explosion limits: Lower: 40 mg/L **Upper:** Not available
Vapor pressure (mm Hg): Data not available
Vapor density (Air = 1): Data not available
Relative density (Specific gravity): 2.7
Solubility(ies): Insoluble in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Al
Molecular weight: 26.98

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.
Incompatible materials: Strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons, and water.
Hazardous decomposition products: Reacts with water, acids or alkalies to generate hydrogen gas.

Section 11 Toxicological Information

Acute toxicity: Data not available
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC classified: Group 1: Carcinogenic to humans (production).
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: It has been reported that chronic exposure has been suspected of causing lung injury.
Ingestion: May be harmful if ingested.
Skin: Contact with skin may cause irritaiton.
Eyes: Contact with eyes may cause irritation and corneal abrasions.
Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: BD0330000

Section 12 Ecological Information

Toxicity to fish: No data available
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN1396 **Shipping name:** Aluminum powder, uncoated
Hazard class: 4.3 **Packing group:** II **Reportable Quantity:** No **Marine pollutant:** No
Exceptions: Limited quantity equal to or less than 0.5 Kg (1.1 lb) **2012 ERG Guide #** 138

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Aluminum	Listed	Not listed	D001 (dust only)	Listed	Not listed	B6

Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program. IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: August 20, 2014 **Supercedes:** April 15, 2013

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 42.00
Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Aluminum Potassium Sulfate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word** N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Aluminum potassium sulfate	7784-24-9	$AlK(SO_4)_2 \cdot 12H_2O$	474.39	
Synonym: Alum				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Wipe up the spill, place in a sealed bag or container, and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, crystalline powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 92.5 °C
Specific gravity: 1.7

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, bases, steel, aluminum, copper, and zinc. When heated to decomposition (200 °C), emits toxic sulfur trioxide fumes.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, gastrointestinal disturbances.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (233-141-3).

SECTION 16 — OTHER INFORMATION

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

Section 1 Chemical Product and Company Identification

ward's science

5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catherines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**ALUMINUM POTASSIUM SULFATE**
Synonyms	Potassium Alum / Alum

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS07
Target organs: Liver, Kidneys

GHS Classification:
Acute toxicity, oral (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2B)

GHS Label information: **Hazard statement:**
H302: Harmful if swallowed.
H315+H320: Causes skin and eye irritation.

Precautionary statement:
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs: Get medical attention.
P337+P313: If eye irritation persists: Get medical attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Aluminum potassium sulfate	7784-24-9	100%	233-141-3

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: Fire or excessive heat above 760°C (1400°F), may produce hazardous decomposition products of toxic and corrosive gases, Sulfur trioxide and Aluminum oxide. Sulfur trioxide is an oxidizing agent which supports combustion and will react with water to form Sulfuric acid.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Aluminum, metal and insoluble compounds	TWA: 1 mg/m^3 Respirable fraction	TWA: 5 mg/m^3 Respirable fraction	TWA: 5 mg/m^3 Respirable fraction

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. White crystals or powder.
Odor: No odor.
Odor threshold: Data not available.
pH: 3.5 (1% solution)
Melting / Freezing point: Loses H_2O at 93°C (199°F)
Boiling point: Data not available
Flash point: Data not available

Evaporation rate (= 1): Data not available
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: Data not available
Vapor pressure (mm Hg): Data not available
Vapor density (Air = 1): Data not available
Relative density (Specific gravity): 1.97
Solubility(ies): Moderately soluble in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available
Viscosity: Data not available.
Molecular formula: $AlK(SO_4)_2 \cdot 12H_2O$
Molecular weight: 474.39

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperature and heat.

Incompatible materials: Aluminum, copper, steel, zinc, strong oxidizing agents.

Hazardous decomposition products: Oxides of sulfur, aluminum oxide, oxides of potassium.

Section 11 Toxicological Information

Acute toxicity: Data not available
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Causes respiratory tract irritation. May be harmful if inhaled.
Ingestion: Harmful if swallowed. Ingestion of large amounts may cause gastrointestinal irritation.
Skin: Causes skin irritation. May be harmful if absorbed through the skin.
Eyes: Causes eye irritation. May cause chemical conjunctivitis.
Signs and symptoms of exposure: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
Additional information: RTECS #: WS5690000

Section 12 Ecological Information

Toxicity to fish: No data available
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: No
Marine pollutant: No
Exceptions: Not applicable
2016 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Aluminum potassium sulfate (CAS # 10043-67-1)	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: January 25, 2018 **Supercedes:** December 30, 2016

SDS No.: 9849 **SAFETY DATA SHEET** **GENERAL STORAGE CODE GREEN**

Section 1 Identification

Nasco
901 Janesville Ave.
Fort Atkinson, WI 53538-0901
Phone: 920-563-2446

CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**AMMONIA SOLUTION (HOUSEHOLD)**
Synonyms	Ammonium Hydroxide, Water Solution

Section 2 Hazards identification

Signal word: WARNING
Pictograms: GHS07 / GHS09
Target organs: Eyes, Skin, Mucous membranes

GHS Classification:
Skin irritation (Category 2)
Eye irritation (Category 2A)
Acute aquatic (Category 1)

GHS Label information: **Hazard statement:**
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H400: Very toxic to aquatic life.

Precautionary statement:
P264: Wash hands thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P332+P313: If skin irritation occurs: Get medical attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	Approximately 96.0%	231-791-2
Ammonium hydroxide (as Ammonia)	1336-21-6	Approximately 4.0%	215-647-6

Section 4 First aid measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Carefully neutralize with Sodium bicarbonate, absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling and storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts/vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8 Exposure controls / personal protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Ammonia CAS No. 7664-41-7	TWA: 17 mg/m^3 ; STEL: 24 mg/m^3	TWA: 50 ppm, 35 mg/m^3	TWA: 18 mg/m^3 ; STEL: 27 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical and chemical properties

Appearance: Clear, colorless liquid.
Odor: Strong ammonia odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: Approximately 0°C (32°F) (water)
Boiling point: Approximately 100°C (212°F) (water)
Flash point: Data not available

Evaporation rate (Water = 1): <1
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: Data not available
Vapor pressure (mm Hg): 14 (water)
Vapor density (Air = 1): 0.7 (water)
Relative density (Specific gravity): Approximately 1.0 (water)
Solubility(ies): Complete in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Mixture
Molecular weight: Mixture

Section 10 Stability and reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatible materials: Acids, strong oxidizers, halogens, heavy metals.

Hazardous decomposition products: Decomposes to ammonia gas and above 450°C (842°F) to hydrogen gas and nitrogen oxides.

Section 11 Toxicological information

Acute toxicity: Oral-rat LD50: 350 mg/kg [Ammonium hydroxide, anhydrous]
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Reproductive toxicity: Data not available
STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects: [Ammonium hydroxide, anhydrous]
Inhalation: Burning sensation, cough, labored breathing, shortness of breath, sore throat.
Ingestion: Abdominal cramps, abdominal pain, sore throat, vomiting,
Skin: Redness, skin burns, pain, blisters.
Eyes: Redness, pain, blurred vision, burns.
Signs and symptoms of exposure: Material is extremely destructive to tissue of the mucous membranes, upper respiratory, gastrointestinal and digestive tracts, eyes and skin. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.
Additional information: RTECS #: BQ9625000 [Ammonium hydroxide, anhydrous]

Section 12 Ecological information

Toxicity to fish: LC50 Lepomis macrochirus (bluegill) 0.024-0.093 mg/L/48H
Toxicity to daphnia and other aquatic invertebrates: LC50 Daphnia magna (water flea) 0.66 mg/L/48H @ 22°C
Toxicity to algae: TLm Diatom (algae) 420 mg/L/120H @ 22°C (50% growth reduction)
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport information

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: Yes
Marine pollutant: No
Exceptions: Not applicable
2020 ERG Guide # Not applicable

Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Ammonium hydroxide	Listed	1,000 lbs (454 kg)	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: September 11, 2020 **Supercedes:** October 2, 2019

Section 1 Chemical Product and Company Identification

ward's science

5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catherines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**AMMONIA SOLUTION (HOUSEHOLD)**
Synonyms	Ammonium Hydroxide, Water Solution

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS07 / GHS09
Target organs: Eyes, Skin, Mucous membranes

GHS Classification:
Skin irritation (Category 2)
Eye irritation (Category 2A)
Acute aquatic (Category 1)

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P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P332+P313: If skin irritation occurs: Get medical attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.
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Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	Approximately 96.0%	231-791-2
Ammonium hydroxide (as Ammonia)	1336-21-6	Approximately 4.0%	215-647-6

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INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Carefully neutralize with Sodium bicarbonate, absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts/vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Ammonia CAS No. 7664-41-7	TWA: 17 mg/m^3 ; STEL: 24 mg/m^3	TWA: 50 ppm, 35 mg/m^3	TWA: 18 mg/m^3 ; STEL: 27 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid.
Odor: Strong ammonia odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: Approximately 0°C (32°F) (water)
Boiling point: Approximately 100°C (212°F) (water)
Flash point: Data not available

Evaporation rate (Water = 1): <1
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: Data not available
Vapor pressure (mm Hg): 14 (water)
Vapor density (Air = 1): 0.7 (water)
Relative density (Specific gravity): Approximately 1.0 (water)
Solubility(ies): Complete in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Mixture
Molecular weight: Mixture

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatible materials: Acids, strong oxidizers, halogens, heavy metals.

Hazardous decomposition products: Decomposes to ammonia gas and above 450°C (842°F) to hydrogen gas and nitrogen oxides.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 350 mg/kg [Ammonium hydroxide, anhydrous]
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects: [Ammonium hydroxide, anhydrous]
Inhalation: Burning sensation, cough, labored breathing, shortness of breath, sore throat.
Ingestion: Abdominal cramps, abdominal pain, sore throat, vomiting,
Skin: Redness, skin burns, pain, blisters.
Eyes: Redness, pain, blurred vision, burns.
Signs and symptoms of exposure: Material is extremely destructive to tissue of the mucous membranes, upper respiratory, gastrointestinal and digestive tracts, eyes and skin. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.
Additional information: RTECS #: BQ9625000 [Ammonium hydroxide, anhydrous]

Section 12 Ecological Information

Toxicity to fish: LC50 Lepomis macrochirus (bluegill) 0.024-0.093 mg/L/48H
Toxicity to daphnia and other aquatic invertebrates: LC50 Daphnia magna (water flea) 0.66 mg/L/48H @ 22°C
Toxicity to algae: TLm Diatom (algae) 420 mg/L/120H @ 22°C (50% growth reduction)
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: Yes
Marine pollutant: No
Exceptions: Not applicable
2016 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Ammonium hydroxide	Listed	1,000 lbs (454 kg)	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Safety Data Sheet

Ammonia Solution, Household

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name: Ammonia Solution, Household
Recommended Use: Science education applications
Synonyms: Ammonia Aqueous, Aqua Ammonia, Ammonium Solution
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER

Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

GHS Classification:
Skin Corrosion/Irritation Category 1A, Serious Eye Damage/Eye Irritation Category 1, Hazardous to the aquatic environment - Acute Category 1, Hazardous to the aquatic environment - Chronic Category 2, Acute Toxicity - Oral Category 4

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Water	7732-18-5	90
Ammonium Hydroxide	1336-21-6	10

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Section 5 Firefighting Procedures

Extinguishing Media: Use dry chemical, CO_2 or appropriate foam.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Dangerous fire hazard; emits irritating fumes and liquid can inflict burns. Ammonia hydroxide is non-combustible and non explosive, but ammonia vapors released from solution can form an explosive mixture in air.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Safety Data Sheet

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Wear a self-contained breathing apparatus and appropriate Personal protection. (See Section 8.) Ventilate the contaminated area. Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed.
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Avoid creating dusts. Cover material with absorbent and moisten and collect for disposal. Collect spillage.

Section 7 Handling and Storage

Handling: Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do no eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from ... (incompatible materials to be indicated by the manufacturer). Do not breathe dust/vapor. Do not get in eyes, on skin, or on clothing. Retained residue may make empty containers hazardous; use caution.

Storage: Store locked up. Keep container tightly closed in a cool, well-ventilated place.

Storage Code: White - Corrosive. Separate acids from bases; separate oxidizer acids from organic acids.

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	(TWA)	(STEL)	(TWA)	(STEL)
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Butyl rubber, Impervious rubber, Natural latex,, Natural rubber, Nitrile - Extra Thick (8 mm)

Section 9 Physical Data

Formula: NH4 * OH
Molecular Weight: 35.06
Appearance: Colorless
Odor: Strong Ammonia
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: 100 C
Flash Point: No data available
Flammable Limits in Air: NH3 gas LEL 16% UEL 25%

Vapor Pressure: 115 mmHg at 20 °C for 10% solution
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): 0.6 NH3
Specific Gravity: 0.9
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: 100%

Section 10 Reactivity Data

Reactivity:	No data available
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	None known.
Incompatible Materials:	Water-reactive materials, Copper, Iron Salts, Zinc
Hazardous Polymerization:	Will not occur

Section 11 Toxicity Data

Routes of Entry	Inhalation.
Symptoms (Acute):	Respiratory disorders
Delayed Effects:	No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Ammonium Hydroxide	1336-21-6	Oral LD50 Rat = 350 mg/kg		INHALATION LC50 Mouse 4500 ppm INHALATION LC50 Mouse 21430 ppm INHALATION LC50 Rat 9500 ppm

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available		Not listed	Not listed	Not listed

Chronic Effects:

Mutagenicity:	No evidence of a mutagenic effect.
Teratogenicity:	No evidence of a teratogenic effect (birth defect).
Sensitization:	No evidence of a sensitization effect.
Reproductive:	No evidence of negative reproductive effects.
Target Organ Effects:	
Acute:	See Section 2
Chronic:	Mutation data cited., Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12 Ecological Data

Overview:	Extreme ecological hazard. This product may be highly toxic to plants and/or wildlife. Keep out of waterways.
Mobility:	No data
Persistence:	No data
Bioaccumulation:	No data
Degradability:	No data
Other Adverse Effects:	No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Ammonium Hydroxide	1336-21-6	96 HR LC50 PIMEPHALES PROMELAS 8.2 MG/L 48 HR EC50 DAPHNIA PULEX 0.66 MG/L 48 HR EC50 WATER FLEA 0.66 MG/L

Section 13 Disposal Information

Disposal Methods:	Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s):	Not Determined

Safety Data Sheet

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
*** Consumer commodity/ORM-D for 500 ml and 4 L bottles. ***

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Ammonium Hydroxide	1336-21-6	No	1000 lb RQ	1000 lb final RQ; 454 kg final RQ	No	No

Section 16 Additional Information

Revised: 09/03/2014 **Replaces: 09/03/2014** **Printed: 09-11-2014**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health

Safety Data Sheet

Ammonium Chloride

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name:	Ammonium Chloride
Recommended Use:	Science education applications
Synonyms:	Sal Ammoniac, Ammoneric, Ammonium Muriate
Distributor:	Carolina Biological Supply Company 2700 York Road, Burlington, NC 27215 1-800-227-1150
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec:	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

WARNING

Harmful if swallowed. Causes serious eye irritation. Toxic to aquatic life.

GHS Classification:
Serious Eye Damage/Eye Irritation Category 2A, Hazardous to the aquatic environment - Acute Category 2, Acute Toxicity - Oral Category 4

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Ammonium Chloride	12125-02-9	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation:	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact:	After contact with skin, wash immediately with plenty of water.
Ingestion:	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5 Firefighting Procedures

Extinguishing Media:	Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection:	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards:	Thermal decomposition produces highly toxic fumes. Explosive reaction with potassium chlorate or bromine trifluoride. Violent reaction (ignition) with bromine pentafluoride, NH4, NO3, and IF7.
Hazardous Combustion Products:	Nitrogen containing gases, Hydrogen chloride

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling: Wash thoroughly after handling. Do no eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with material. Avoid creating and inhaling dust. Keep away from ... (incompatible materials to be indicated by the manufacturer). After contact with skin, wash immediately with plenty of water.

Storage: Store in a dry area Material is hygroscopic (absorbs moisture).

Storage Code: Green - general chemical storage

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Ammonium Chloride	10 mg/m3 TWA (fume)	20 mg/m3 STEL (fume)	10 mg/m3	20 mg/m3

Control Parameters

Engineering Measures: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Follow the ACGIH recommended exposure limit of 10 mg/m3 for Particulates Not Otherwise Classified (PNOC).

Eye Protection: Wear safety glasses with side shields and a Face shield

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: No information available

Section 9 Physical Data

Formula: NH4Cl
Molecular Weight: 53.50
Appearance: Powder
Odor: No data available
Odor Threshold: No data available
pH: 4.5 - 5.5 at 50.00000 g/l at 20.0 °C (68.0 °F)
Melting Point: 338 C
Boiling Point: No data available
Flash Point: No data available
Flammable Limits in Air: No data available

Vapor Pressure: .97 mmHg at 30 °C
Evaporation Rate (BuAc=1): No data available
Vapor Density (Air=1): No data available
Specific Gravity: 1.53
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: No data available

Section 10 Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Exposure to moisture
Incompatible Materials: Strong acids, Strong oxidizing agents, Caustics (bases)
Hazardous Decomposition Products: Hydrogen chloride, Nitrogen containing gases
Hazardous Polymerization: Will not occur

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Section 11 Toxicity Data

Routes of Entry Inhalation and ingestion.
Symptoms (Acute): , Eye disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium Chloride	12125-02-9	Oral LD50 Mouse 1300 mg/kg Oral LD50 Rat 1650 mg/kg	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available	12125-02-9	Not listed	Not listed	Not listed

Chronic Effects:
Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Mutation data cited., Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12 Ecological Data

Overview: Severe ecological hazard. This product may be toxic to plants and/or wildlife.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Ammonium Chloride	12125-02-9	24 HR LC50 LEPOMIS MACROCHIRUS 725 MG/L 96 HR LC50 CYPRINUS CARPIO 209 MG/L [STATIC] 24 HR LC50 DAPHNIA MAGNA 202 MG/L

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Ammonium chloride) Reportable Quantity (RQ): 5000 lbs

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Ammonium Chloride	12125-02-9	No	5000 lb RQ	5000 lb final RQ; 2270 kg final RQ	No	No

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Section 16 Additional Information

Revised: 09/03/2014 **Replaces: 09/03/2014** **Printed: 09-11-2014**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health

Section 1 Chemical Product and Company Identification

ward's science

5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catherines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

CHEMTREC 24 Hour Emergency USA
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**AMMONIUM CHLORIDE**
Synonyms	Ammonium Muriate ; Sal Ammoniac

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: GHS07
Target organs: None known

GHS Classification:
Acute toxicity, oral (Category 4)
Eye irritation (Category 2A)

GHS Label information: **Hazard statement:**
H302: Harmful if swallowed.
H319: Causes serious eye irritation.

Precautionary statement:
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Ammonium chloride	12125-02-9	100%	235-186-4

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.
Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.
Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Reacts violently with ammonium nitrate and potassium chlorate. This generates fire and explosion hazard. Vaporizes at temperatures of about 335°C (653°F) evolving fumes of nitrogen oxides, chloride ions and ammonia gas.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for reuse if not contaminated. Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Ammonium chloride fume	TWA: 10 mg/m^3 STEL: 20 mg/m^3	None established	TWA: 10 mg/m^3 STEL: 20 mg/m^3

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid, white, crystalline powder
Odor: No odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: 520°C (968°F)
Boiling point: Sublimes @ 340°C (644°F)
Flash point: Data not available

Evaporation rate (= 1): Data not available
Flammability (solid/gas): Data not available.
Explosion limits: as NH_3 **Lower:** 15% **Upper:** 28%
Vapor pressure (mm Hg): Data not available
Vapor density (Air = 1): Data not available
Relative density (Specific gravity): 1.527
Solubility(ies): Soluble in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: NH_4Cl
Molecular weight: 53.49

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Somewhat hygroscopic. Has an acid reaction in aqueous solution, solid tends to lose ammonia and become more acid on exposure and in storage.

Incompatible materials: Oxidizing agents, acids, bases, lead and silver salts.

Hazardous decomposition products: Ammonia and hydrogen chloride.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 1,650 mg/kg
Skin corrosion/irritation: Skin-rabbit - Slight irritant.
Serious eye damage/irritation: Eyes-rabbit - irritant.
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Inhalation of dust or fume from heating may cause upper respiratory tract irritation, coughing, and choking sensation.
Ingestion: Ingestion of large doses cause nausea, vomiting, acidosis, irritation of the mouth, esophagus and gastric system. Ingestion may result in low grade toxicity.
Skin: Contact with skin causes irritation and/or dermatitis.
Eyes: Contact with eyes causes irritation and/or visual impairment.
Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: BP4550000

Section 12 Ecological Information

Toxicity to fish: Salmo clarki (fish, fresh water, marine), LC50 = 123.8 - 166.6 mg/L/96 hours
Toxicity to daphnia and other aquatic invertebrates: Artemia salina (Crustacea), EC50 = 28 mg/L/24 hours
Toxicity to algae: Dunaliella tertiolecta (Algae) EC40 = 21.3 mg/L/90 minutes
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: No
Marine pollutant: No
Exceptions: Not applicable
2016 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Ammonium chloride	Listed	5000 lbs (2270 kg)	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: January 26, 2018 **Supercedes:** October 24, 2016

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 53.10
Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ammonium Chloride Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 2).Causes skin irritation (H315).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ammonium chloride	12125-02-9	NH_4Cl	53.49	5-10%
Water	7732-18-5	H_2O	18.00	90-95%
Synonym: Ammonium muriate				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Concentrated solutions maybe slightly cloudy. Odorless.

pH: ~5

SECTION 10 — STABILITY AND REACTIVITY

Avoid heat; decomposes when heated.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 1650 mg/kg as Ammonium Chloride
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

Ammonium Hydroxide

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Ammonium Hydroxide

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: AH1200-P

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:

Corrosive
Skin corrosion, category 1B

Environmentally Damaging
Acute hazards to the aquatic environment, category 1

Irritant
Specific target organ toxicity following single exposure, category 3

STOT SE 3.
AcAq Tox 1.
Skin Corr. 1B.

Signal word: None

Hazard statements:

Causes severe skin burns and eye damage.
May cause respiratory irritation.
Very toxic to aquatic life.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not breathe dust/fume/gas/mist/vapours/spray.
Avoid release to the environment.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
Do not eat, drink or smoke when using this product.
Wash skin thoroughly after handling.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Collect spillage.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Store locked up.
Store in a dry place.
Store in a well ventilated place. Keep container tightly closed.
Dispose of contents/container.

Other Non-GHS Classification: None

SECTION 3: Composition/Information on ingredients

Ingredients:

Ingredients:		
CAS 1336-21-6	Ammonium Hydroxide	<40 %
CAS 12125-02-9	Ammonium Chloride	<7 %
CAS 7732-18-5	Water, purified	>53 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen.

After skin contact:

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

Ammonium Hydroxide

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Advice for firefighters:

Protective equipment:

Use NIOSH-approved respiratory protection/breathing apparatus.

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Transfer to a disposal or recovery container. Use spark-proof tools and explosion-proof equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air. Collect solids in powder form using vacuum with HEPA filter.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Wash hands after handling. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities:

Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Store with like hazards.

SECTION 8: Exposure controls/personal protection

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

Ammonium Hydroxide



Control parameters:

1336-21-6, Ammonium Hydroxide, ACGIH TLV: 17 mg/m3.
1336-21-6 , Ammonium Hydroxide , OSHA PEL: 35 mg/m3.
1336-21-6, Ammonium Hydroxide, OSHA TWA 25 ppm (18 mg/m3) ST 35 ppm (27 mg/m3).
1336-21-6, Ammonium Hydroxide, ACGIH TWA 25 ppm (18 mg/m3) ST 35 ppm (27 mg/m3).
12125-02-9, Ammonium chloride, ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) 10 mg/m3 TWA (fume).
12125-02-9, Ammonium chloride, ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) 20 mg/m3 STEL (fume).
12125-02-9, Ammonium chloride, NIOSH REL - TWA 10 mg/m3 TWA (fume).
12125-02-9, Ammonium chloride, NIOSH - REL- STELs 20 mg/m3 STEL (fume).

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a fume hood. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Respiratory protection:

Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection:

Safety glasses with side shields or goggles.

General hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	**Explosion limit lower:** **Explosion limit upper:**	Not determined Not determined
Odor:	Ammonia - like	**Vapor pressure at 20°C:**	115 at 20 C
Odor threshold:	Not determined	**Vapor density:**	3.38
pH-value:	9	**Relative density:**	0.9

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

Ammonium Hydroxide

Melting/Freezing point:	- 72 C	**Solubilities:**	Infinite solubility in water.
Boiling point/Boiling range:	36 C	**Partition coefficient (n-octanol/water):**	Not determined
Flash point (closed cup):	Not determined	**Auto/Self-ignition temperature:**	Not determined
Evaporation rate:	Not determined	**Decomposition temperature:**	Not determined
Flammability (solid, gaseous):	Not determined	**Viscosity:**	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	0.9 g/cm3 at 20 °C		

SECTION 10: Stability and reactivity

Reactivity: None

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions: None

Conditions to avoid:

Store away from oxidizing agents, strong acids or bases.

Incompatible materials:

Strong oxidizers, acids, gold, mercury, halogens, silver, calcium hypochlorite bleaches.

Hazardous decomposition products:

Ammonia and nitrogen oxides.

SECTION 11: Toxicological information

Acute Toxicity:
Chronic Toxicity: No additional information.
Skin corrosion/irritation: No additional information.
Serious eye damage/irritation: No additional information.
Respiratory or skin sensitization: No additional information.
Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.
Reproductive Toxicity: No additional information.
STOT-single and repeated exposure: No additional information.
Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

: Fish (acute 1336-21-6), 96 Hr LC50 Pimephales promelas: 8.2 mg/L.
: Crustacea (acute 1336-21-6), 48 Hr EC50 water flea: 0.66 mg/L; 48 Hr EC50 Daphnia pulex: 0.66 mg/L.
: Fish (acute 12125-02-9): , 96 Hr LC50 Cyprinus carpio: 209 mg/L .

Persistence and degradability:

Readily degradable in the environment.

Bioaccumulative potential: No additional information.
Mobility in soil: No additional information.
Other adverse effects: No additional information.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA 2672

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: Ammonia Solution.
Hazard Class: 8
Packing Group: III.
Marine Pollutant (if applicable): No
additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Ammonia Solution.
Hazard Class: 8
Packing Group: III.
Marine Pollutant (if applicable): No
additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

1336-21-6 Ammonium Hydroxide.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

1336-21-6 Ammonium Hydroxide, ACS 1000.
12125-02-9 Ammonium chloride 5000 lbs.

Proposition 65 (California):

Chemicals known to cause cancer:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.31.2014

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 2-0-0
HMIS: 2-0-0
GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 58.05
Revision Date: December 13, 2013

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ammonium Hydroxide Solution, 1M or Less

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word** **DANGER**

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 2). Causes skin irritation (H315).

Hazard class: Serious eye damage or irritation (Category 1). Causes serious eye damage (H318).

Pictograms

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ammonium hydroxide	1336-21-6	NH_4OH	35.05	4% or less
Water	7732-18-5	H_2O	18.00	96% or more

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing Immediately call a POISON CENTER or physician (P305+P351+P338+P310).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Do NOT induce vomiting.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store in a dedicated base cabinet. If a cabinet is not available, store in a Flinn Saf-Cube™. Keep container tightly closed (P233).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Strong ammonia odor.

Odor threshold: 5-50 ppm as ammonia
pH: basic

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, copper, galvanized iron, and aluminum.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, corrosive to skin, eyes, and respiratory tract, lachrymator
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 350 mg/kg as ammonia water
IHL-HUMAN TLC_0: 408 ppm as ammonia water
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #10 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (215-647-6), RCRA code D002.

SECTION 16 — OTHER INFORMATION

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 61.00
Revision Date: March 21, 2014

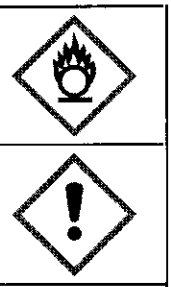
SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ammonium Nitrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 3). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ammonium nitrate	6484-52-2	NH_4NO_3	80.04	
Synonym: Nitric acid, ammonium salt				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351 +P338).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.
May explode under confinement and high temperatures or if exposed to reducing agents.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher. Take any precautions to avoid mixing with combustibles (P221+P370+P378).

NFPA CODE
H-0
F-0
R-3
OX

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and water. Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates, and permanganates.
Store away from all combustibles. Keep and store away from clothing and combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221). Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals. Odorless.
Soluble: Water, alcohol, and alkalies.

Boiling point: 210 °C (decomposes)
Melting point: 170 °C
Specific gravity: 1.725

SECTION 10 — STABILITY AND REACTIVITY

Store away from any source of combustion or ignition. Avoid contact with reducing agents, strong acids, finely powdered metals, and organic materials. Do not grind in a mortar and pestle - potentially shock sensitive.
Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, gastrointestinal disturbances.
Chronic effects: N.A.
Target organs: Blood, central nervous system.

ORL-RAT LD_{50}: 2217 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Ammonium Nitrate. Hazard class: 5.1, Oxidizer. UN number: UN1942.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (229-347-8), RCRA code D001, D003.

SECTION 16 — OTHER INFORMATION

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

COLUMBUS CHEMICAL INDUSTRIES INC.

Safety Data Sheet

Ammonium Nitrate Granular, ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ammonium Nitrate Granular, ACS

Synonyms/Generic Names: Ammonium salt, nitram; Norway saltpeter; Nitric acid ammonium salt

Product Number: 0515

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Oxidizer, Carcinogen, Target organ effect, Irritant

Target Organs: Blood, Central nervous system

Signal Words: Warning

Pictograms:

GHS Classification:

Oxidizing solids	Category 3
Acute toxicity, Oral	Category 5
Skin irritation	Category 2
Eye irritation	Category 2A
Specific target organ toxicity – single exposure	Category 3

GHS Label Elements, including precautionary statements:

Hazard Statements:

H272	May intensify fire; oxidizer.
H303	May be harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary Statements:

P220	Keep/store away from clothing/combustible materials.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	1
Flammability	0
Reactivity	3
Specific hazard	OX

HMIS Ratings

Health	1
Fire	0
Reactivity	3
Personal	E

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Ammonium Nitrate	>98	6484-52-2	229-347-8	NH_4NO_3	80.04 g/mol

4. FIRST-AID MEASURES

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention if necessary.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (nitrogen oxides, ammonia) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.

Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Sweep up and shovel. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Keep away from sources of ignition – No smoking. Avoid formation of dusts.

Conditions for safe storage, including any incompatibilities
Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities). Hygroscopic. Store under inert gas. Keep away from sources of ignition – No smoking.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, body covering clothing or plastic apron, boots.
Other	Not Available

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Colorless to white crystals.
Odor	Not Available
Odor threshold	Not Available
pH	4.5-6.0 @80.40 g/l @ 25°C (77°F)
Melting point/freezing point	169°C (336°F)
Initial boiling point and boiling range	210°C (410°F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Flammable
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	Not Available
Solubility (ies)	Completely soluble in water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat, moisture, sources of ignition.
Incompatible Materials	Organic and combustible materials, strong reducing agents, acids, powdered metals, alkalis.
Hazardous Decomposition Products	Nitrogen oxides, ammonia.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	LD50 Oral – rat – 2217 mg/kg

Carcinogenicity

IARC	2A – Group 2A: Probably carcinogenic to humans.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, redness, and/or swelling.
Eyes	Irritation, redness.
Respiratory	Irritation, cough, difficulty breathing, sneezing.
Ingestion	Nausea, irritation of esophagus and mouth, gastrointestinal pain.

Chronic Toxicity	Causes damage to the following organs: lungs, mucous membranes. May cause damage to the following organs: blood, gastrointestinal tract.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Inhalation – May cause respiratory irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1942, Ammonium Nitrate, 5.1, pg III
TDG	UN1942, AMMONIUM NITRATE, 5.1, pg III
IMDG	UN1942, AMMONIUM NITRATE, 5.1, pg III
Marine Pollutant	No
IATA/ICAO	UN1942, Ammonium Nitrate, 5.1, pg III

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Ammonium Nitrate
SARA 312	Ammonium Nitrate
SARA 313	Listed: Ammonium Nitrate
WHMIS Canada	Class C: Oxidizing material.

16. OTHER INFORMATION

Revision	Date
Revision 1	06/11/2012

ANALYSIS OF DRUGS AND POISONS KIT #10-502

KEMTEC AQUAPHOENIX

Introduce students to qualitative analysis in the intriguing context of criminal investigation in a Toxicology Laboratory. Analysis of Drugs & Poisons includes five experiments: Identifying Over-The-Counter Drugs, Identification of Simulated Controlled Substances, Presumptive Testing for Cocaine, Determination of Poisoning through Amino Acids in Simulated Urine, and Analysis of Unknowns from a Crime Scene. Ideal for teaching chain of custody and techniques for isolating drug sample evidence. Includes instructor's manual with reproducible student instructions, data sheets, and complete answer keys.

Chemicals Included:

- Scott Reagent
- Butanol
- Acetic Acid
- Acidified Ferric Nitrate
- Acetone
- Hydrochloric Acid
- Sodium Bicarbonate
- Ninhydrin

PLEASE LOOK UP CHEMICAL SDS'S INDIVIDUALLY

ANALYSIS OF MINERALS AND SOILS KIT # 10-500

Kemtec AKA - AQUAPHOENIX

Kemtec's Analysis of Minerals & Soils kit now extends the student's experience from investigating the physical and chemical properties of trace evidence from a crime scene, to learning to characterize soil texture. Ideal for forensic science, agriculture, and environmental science courses. Experiments include: Characterizing Soil Appearance, Acidity of Soil, Soil Comparison by Particle Size Analysis, Forensic Density Distribution of Soil Particles, Chemical Reactions of Substances in Soil, and Analysis of Glass Samples. Includes hands-on soil classification extension activities for determining soil texture by sedimentation and by using the feel method.

Chemicals Included:

Universal Indicator
Bromoform
Bromobenzene
Hydrochloric Acid

PLEASE LOOK UP CHEMICAL SDS'S INDIVIDUALLY

Section 1 Identification

Aldon Corporation
221 Rochester Street
Avon, NY 14414
(585) 226-6177

CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory and industrial use only.
Not for drug, food or household use.

Product	**ANTI-SERUM, SIMULATED, ANTI-RH**
Synonyms	None assigned

Section 2 Hazards identification

Signal word: WARNING
Pictograms: No symbol required
Target organs: Liver

GHS Classification:
Eye irritation (Category 2B)

GHS Label information: **Hazard statement:**
H320: Causes eye irritation.

Precautionary statement:
P264: Wash hands thoroughly after handling.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.

Hazards not otherwise classified:
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	92.00%	231-791-2
Sodium salicylate	54-21-7	8.00%	200-198-0

Section 4 First aid measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling and storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Light sensitive. Protect from light.

Section 8 Exposure controls / personal protection

Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Sodium salicylate	Not established	Not established	Not established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical and chemical properties

Appearance: Clear liquid
Odor: No odor.
Odor threshold: Data not available.
pH: Data not available.
Melting / Freezing point: Approximately 0°C (32°F) (water)
Boiling point: Approximately 100°C (212°F) (water)
Flash point: Data not available

Evaporation rate (Water = 1): <1
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: Data not available
Vapor pressure (mm Hg): 14 (water)
Vapor density (Air = 1): 0.7 (water)
Relative density (Specific gravity): Approximately 1.0 (water)
Solubility(ies): Complete in water.

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Mixture
Molecular weight: Mixture

Section 10 Stability and reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures which cause evaporation. Light sensitive.

Incompatible materials: Strong oxidizers, strong acids.

Hazardous decomposition products: Carbon oxides, sodium oxides.

Section 11 Toxicological information

Acute toxicity: Acute toxicity estimate: Oral-rat LD50: 11,625 mg/kg
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Eyes-rabbit - Irritant.
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: Harmful if swallowed.
Skin: Prolonged contact may cause irritation and/or defatting of skin.
Eyes: Causes serious eye irritation.
Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: VO5075000 [Sodium salicylate]

Section 12 Ecological information

Toxicity to fish: LC50 - Pimephales promelas (fathead minnow) - 1,370 mg/l - 96 h [Sodium salicylate]
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
PBT and vPvB assessment: No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport information

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: No
Marine pollutant: No
Exceptions: Not applicable
2020 ERG Guide # Not applicable

Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Sodium salicylate	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: September 16, 2020 **Supercedes:** October 26, 2018

Section 1 Identification

Aldon Corporation
221 Rochester Street
Avon, NY 14414
(585) 226-6177

CHEMTREC 24 Numéros De Téléphone De Secours D'Heure (800) 424-9300
Pour l'usage industriel et de laboratoire seulement.
Pas pour l'usage de drogue, de nourriture ou de ménage.

Produit	**ANTISÉRUM, SIMULÉ, ANTI-RH**
Synonymes	Non attribué

Section 2 Identification des dangers

Mention d'avertissement: AVERTISSEMENT
Pictogrammes: Aucun symbole n'est demandé
Les organes cibles: Le foie

Classification par le GHS:
Eye irritation (Catégorie 2B)

Renseignements sur l'étiquette GHS: Mention de danger:
H320: Provoque une irritation des yeux.

Déclarations de précaution:
P264: Se laver les mains soigneusement après manipulation.
P305+P351+P338: EN CAS DE CONTACT AVEC LES YEUX: Rincer avec précaution à l'eau pendant 15 minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.
P337+P313: Si l'irritation oculaire persiste: Obtenir des soins médicaux.

Dangers non classés autrement:
Dangers pour la santé non classés ailleurs (HHNOC) - pas connu
Dangers physiques non classés autrement (PHNOC) - pas connu

Section 3 Composition / information sur les ingrédients

Nommé Chimique	# CAS	%	EINECS
L'eau	7732-18-5	92.00%	231-791-2
Salicylate de sodium	54-21-7	8.00%	200-198-0

Section 4 Premiers soins

INGESTION: Appeler un médecin ou un centre antipoison immédiatement. Provoquer le vomissement seulement si elle est informée par le personnel compétent médicaux. Ne jamais rien donner par la bouche à une personne inconsciente.

INHALATION: Sortir au grand air. Si elle ne respire pas, pratiquer la respiration artificielle. Si la respiration est difficile, donner de l'oxygène. Obtenir des soins médicaux.

CONTACT AVEC LES YEUX: PROVOQUE UNE IRRITATION DES YEUX. Vérifier et enlever les lentilles de contact. Rincer abondamment à l'eau pendant au moins 15 minutes, en soulevant les paupières inférieures et supérieures de temps en temps. Obtenez une attention médicale immédiate.

ABSORPTION PAR LA PEAU: Enlever les vêtements contaminés. Rincer soigneusement avec du savon doux et d'eau. En cas d'irritation, consulter un médecin.

Section 5 Mesures à prendre en cas d'incendie

Moyens d'extinction: Utiliser un agent extincteur approprié au type de feu environnant.

Actions de protection pour les sapeurs-pompiers: En cas d'incendie, porter un appareil respiratoire NIOSH/MSHA approuvé autonome et un équipement complet de protection. Utiliser un jet d'eau pour maintenir incendie refroidir les conteneurs exposés.

Dangers spécifiques: En cas de feu, de l'eau peut s'évaporer à partir de cette solution, qui peut causer les produits dangereux de décomposition à être formée comme poussière ou vapeur.

Section 6 Mesures à prendre en cas de dévrsement accidentel

Précautions personnelles: Évacuer le personnel vers la zone sûre. Utiliser un équipement de protection personnelle comme indiqué dans la Section 8. Assurer une ventilation adéquate.

Précautions environnementales: Éviter tout ruissellement vers les égouts pluviaux et les fossés qui aboutissent aux voies navigables.

Confinement et de nettoyage: Absorber avec un matériau inerte, balayer à sec ou sous vide et placer dans un récipient approprié pour l'élimination. Laver la zone de déversement avec du savon et de l'eau.

Section 7 Manutention et stockage

Précautions pour la manutention en toute sécurité: Lire l'étiquette sur le contenant avant d'utiliser. Ne pas porter de lentilles cornéennes lorsque vous travaillez avec des produits chimiques. Tenir hors de portée des enfants. Éviter tout contact avec les yeux, la peau et les vêtements. Ne pas inhaler les vapeurs, les embruns ou le brouillard. Utiliser avec une ventilation adéquate. Éviter l'ingestion. Bien se laver après la manipulation. Retirer et laver les vêtements avant de les réutiliser.

Conditions de stockage: Stocker dans un endroit frais et bien aéré, loin des substances incompatibles. Sensible à la lumière. Protéger de la lumière.

Section 8 Contrôle de l'exposition / protection individulle

Limites d'exposition:

Nommé Chimique	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Salicylate de sodium	Aucun établi	Aucun établi	Aucun établi

Contrôles d'ingénierie: Les installations d'entreposage ou d'utilisation de ce matériel doit être équipé d'une douche oculaire et une douche de sécurité et le matériel d'extinction d'incendie. Le personnel doit porter des lunettes de sécurité, des lunettes, ou un écran facial, une blouse de laboratoire ou tablier, des gants protecteurs appropriés. Utiliser une ventilation adéquate pour maintenir les concentrations atmosphériques faible.
Protection respiratoire: Aucun ne devrait être nécessaire dans le laboratoire normal manipulant aux températures ambiantes. Si les conditions brumeuses prévaloir, travailler dans la hotte ou de porter un masque respiratoire approuvé NIOSH / MSHA.

Section 9 Propriétés physiques et chimiques

Apparence: Liquide transparent
Odeur: Aucun odeur.
Seuil de l'odeur: Données non disponibles.
pH: Données non disponibles.
Point de fusion / congélation: Environ 0°C (32°F) (eau)
Point d'ébullition: Environ 100°C (212°F) (eau)
Point d'éclair: Données non disponibles

Taux d'évaporation (Eau = 1): <1
Inflammabilité (solide / gaz): Données non disponibles.
Limites d'explosivité: Bas / Max: Données non disponibles
Pression de vapeur (mm Hg): 14 (eau)
Densité de vapeur (Air = 1): 0.7 (eau)
Densité relative (gravité spécifique): Environ 1.0 (eau)
Solubilité (s): Complet dans l'eau.

Coefficient de partage: Données non disponibles
Auto-inflammation: Données non disponibles
Température de décomposition: Données non disponibles.
Viscosité: Données non disponibles.
Formule moléculaire: Mélange
Poids moléculaire: Mélange

Section 10 Stabilité et réactivité

Stabilité chimique: Stable
Polymérisation dangereuse: N'aura pas lieu.
Conditions à éviter: Les températures excessives qui causent l'évaporation. Sensible à la lumière.

Matières incompatibles: Comburantes fortes, acides fortes.

Produits dangereux de décomposition: Oxydes de carbones, oxydes de sodium.

Section 11 Données toxicologiques

Toxicité aiguë: Estimation de la toxicité aiguë: Oral-rat LD50: 11,625 mg/kg
La corrosion de la peau et l'irritation: Données non disponibles
Des lésions oculaires graves / irritation: Yeux-lapin - Irritant
Respiratoire ou sensibilisation de la peau: Données non disponibles
Mutagénicité des cellules germinales: Données non disponibles
Cancérogène: Données non disponibles
NTP: Aucun composant de ce produit présent à des niveaux supérieurs ou égaux à 0,1% n'a été identifié comme cancérigène reconnu ou présumé par NTP.
IARC: Aucun composant de ce produit présent à des niveaux supérieurs ou égaux à 0,1% n'a été identifié comme cancérigène probable, possible ou confirmé par IARC.
OSHA: Aucun composant de ce produit présent à des niveaux supérieurs ou égaux à 0,1% n'a été identifié comme cancérigène ni comme cancérigène possible par OSHA.
Toxicité pour la reproduction: Données non disponibles
STOT-exposition unique: Données non disponibles
STOT-une exposition répétée: Données non disponibles
Risque d'aspiration: Données non disponibles
Effets d'une surexposition:
Inhalation: Peut être nocif en cas d'inhalation. Peut causer une irritation des voies respiratoires.
Ingestion: Nocif en cas d'ingestion.
Peau: Un contact prolongé peut provoquer une irritation et / ou le dégraissage de la peau.
Yeux: Provoque une irritation des yeux.
Les signes et les symptômes de l'exposition: Au meilleur de notre connaissance les propriétés chimiques, physiques et toxicologiques n'ont pas été à fond étudiées. Les données spécifiques ne sont pas disponibles. Procédures appropriées d'exercice pour réduire au minimum des risques
Informations complémentaires: RTECS #: VO5075000 [Salicylate de sodium]

Section 12 Données écologiques

Toxicité pour les poissons: LC50 - Pimephales promelas (fathead minnow) - 1,370 mg/l - 96 h [Salicylate de sodium]
Toxicité pour les daphnies et autres invertébrés aquatiques: Pas de données disponible
Toxicité pour les algues: Pas de données disponible
Persistance et dégradabilité: Pas de données disponible
Potentiel de bioaccumulation: Pas de données disponible
Mobilité dans le sol: Pas de données disponibles
Évaluation PBT et vPvB: Pas de données disponibles
Autres effets indésirables: Un danger pour l'environnement ne peut pas être exclu dans l'éventualité d'une manipulation ou d'élimination.

Section 13 Données sur l'elimination

Ces lignes directrices sont destinées à l'élimination de la disposition d'un catalogue de taille seules les quantités. Les règlements fédéraux peuvent s'appliquer aux contenants vides. Des réglementations nationales et / ou local peut être différent. Éliminer conformément à toutes les réglementations locales, provinciales et fédérales ou d'un contrat avec une agence élimination des produits chimiques sous licence.

Section 14 Informations relatives au transport

Numéro UN / NA: Non applicable
Nom d'expédition: Non réglé
Classe de danger: Non applicable
Groupe d'emballage: Non applicable
Quantité à déclarer: Non
Polluant marin: Non
Exceptions: Non applicable
2020 ERG Guide #: Non applicable

Section 15 Informations sur la réglementation

Un produit chimique est considéré comme inscrit si le numéro CAS pour la forme anhydre est sur la liste d'inventaire.

Composant	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	
Salicylate de sodium	Listed	Not listed	Not listed	Listed	Not listed	

Section 16 Autres renseignements

Les informations contenues dans ce document sont fournis sans garantie d'aucune sorte. Les employeurs devraient considérer cette information seulement comme complément à d'autres informations recueillies par eux et doivent prendre des décisions indépendantes de la pertinence et l'exhaustivité de l'information de toutes les sources afin d'assurer une utilisation correcte de ces matériaux et de la sécurité et la santé des employés. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Date de révision: 16 septembre, 2020 **Remplace:** 26 octobre, 2018

ThermoFisher
SCIENTIFIC

SAFETY DATA SHEET

Creation Date 22-Sep-2009 **Revision Date** 22-May-2017 **Revision Number** 3

1. Identification

Product Name **Antimony**

Cat No. : **A845-500**

Synonyms Antimony Regulus; Stibium

Recommended Use Laboratory chemicals.
Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification
Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

Label Elements

Signal Word
Warning

Hazard Statements
Harmful if inhaled
Harmful if swallowed
Causes skin irritation
Causes eye irritation
May cause respiratory irritation

Precautionary Statements
Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Avoid breathing dust/fume/gas/mist/vapors/spray
Inhalation
Call a POISON CENTER or doctor/physician if you feel unwell
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Skin
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation occurs: Get medical advice/attention
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Ingestion
Rinse mouth
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
None identified

3. Composition / Information on Ingredients

Component	CAS-No	Weight %
Antimony	7440-36-0	>= 99.5

4. First-aid measures

Eye Contact — Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact — Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation — Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion — Do not induce vomiting. Obtain medical attention.

Most important symptoms/effects — No information available.
Notes to Physician — Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media No information available

Flash Point No information available
Method - No information available

Autoignition Temperature 330 °C
Explosion Limits
Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
Fumes
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
3	1	0	N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.
Environmental Precautions See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid ingestion and inhalation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Antimony	TWA: 0.5 mg/m³	(Vacated) TWA: 0.5 mg/m³ TWA: 0.5 mg/m³	IDLH: 50 mg/m³ TWA: 0.5 mg/m³	TWA: 0.5 mg/m³

- American Conference of Governmental Industrial Hygienists
- Occupational Safety and Health Administration
The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Silver
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	630 °C
Boiling Point/Range	1635 °C
Flash Point	No information available
Evaporation Rate	negligible
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	negligible
Vapor Density	No information available
Specific Gravity	6.684
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	330 °C
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	Sb
Molecular Weight	121.71

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Fumes
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation

Antimony	LD50 = 7 g/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes, respiratory system and skin

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Antimony	7440-36-0	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity
Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Antimony	Not listed	Cyprinodon variegatus: LC50 = 6.2-8.3 mg/L/96h	Not listed	Not listed

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No	UN2871
Proper Shipping Name	ANTIMONY POWDER
Hazard Class	6.1
Packing Group	III

TDG

UN-No	UN2871
Proper Shipping Name	ANTIMONY POWDER
Hazard Class	6.1
Packing Group	III

IATA

UN-No	UN2871
Proper Shipping Name	ANTIMONY POWDER
Hazard Class	6.1
Packing Group	III

IMDG/IMO

UN-No	UN2871
Proper Shipping Name	ANTIMONY POWDER
Hazard Class	6.1
Packing Group	III

15. Regulatory Information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Antimony	X	X	-	231-146-5	-		X	-	X	X	X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Antimony	7440-36-0	>= 99.5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Antimony	-	-	X	X

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Antimony	X		-

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
Not applicable

Component	Hazardous Substances RQs	CERCLA EHS RQs
Antimony	5000 lb 10 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Antimony	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 22-Sep-2009
Revision Date 22-May-2017
Print Date 22-May-2017
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

Safety Data Sheet

Antimony Metal

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Antimony Metal

Synonyms/Generic Names: Stibium

SDS Number: 66.00

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target organ effect

Target Organs: Respiratory and Cardiovascular system, Liver, Kidneys

Signal Words: None

Pictograms: None

GHS Classification:

Not a dangerous substance according to GHS

GHS Label Elements, including precautionary statements:

Hazard Statements:

None

Precautionary Statements:

None

Potential Health Effects

Eyes	May cause eye irritation.
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	1
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	1
Fire	0
Reactivity	0
Personal	C

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Antimony	100	7440-36-0	231-146-5	Sb	121.76

4. FIRST-AID MEASURES

Eyes	Flush eyes with water as a precaution.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Wash off with soap and plenty of water.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (antimony oxide) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Sweep up and shovel. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities
Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Antimony	0.5 mg/m^3	TLV	ACGIH
	0.5 mg/m^3	PEL	OSHA
	0.5 mg/m^3	REL	NIOSH

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Silver metal lumps.
Odor	Odorless.
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	630°C (1,166°F)
Initial boiling point and boiling range	1,950°C (3,542°F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Flammable
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	Not Available
Solubility (ies)	Insoluble
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat.
Incompatible Materials	Oxidizers, acids, hydrogen gas, halogen acids, reducing agents.
Hazardous Decomposition Products	Antimony oxide.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	LD50 Oral – rat – 7,000 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Redness, itching.
Eyes	Redness, tearing.
Respiratory	Irritation of mucous membranes.
Ingestion	Irritation and burning sensations of mouth and throat, nausea, vomiting, abdominal pain.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	May cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product containers.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Not Listed
SARA 312	Not Listed
SARA 313	Listed: Antimony
WHMIS Canada	Not Listed

16. OTHER INFORMATION

Revision	Date
Revision 1	01/08/2013
Revision 2	06/20/2013

SAFETY DATA SHEET

1. Identification

Product identifier **Appearance 2000**

Other means of identification

Product code 9641/5/55

Recommended use Floor Finish

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Fuller Commercial Products	
Address	One Fuller Way Great Bend, KS 67530 United States	
Telephone	Customer Service	(800) 810-4829
E-mail	Not available.	
Emergency phone number	CHEMTREC	(800) 424-9300
	Emergency	(620) 792-1711
	24 hour Emergency	(800) 424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word Warning

Hazard statement Direct contact with eyes may cause temporary irritation. May Cause Skin Irritation. The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response If exposed or concerned: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
DIETHYLENE GLYCOL MONOETHYL ETHER		111-90-0	5 - < 10
TRIBUTOXYETHYLPHOSPHATE		78-51-3	1 - < 3
AMMONIUM HYDROXIDE		1336-21-6	< 0.2
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
AMMONIUM HYDROXIDE (CAS 1336-21-6)	PEL	35 mg/m3
		50 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
AMMONIUM HYDROXIDE (CAS 1336-21-6)	STEL	35 ppm
	TWA	25 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
AMMONIUM HYDROXIDE (CAS 1336-21-6)	STEL	27 mg/m3
		35 ppm
	TWA	18 mg/m3
		25 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)	TWA	140 mg/m3
		25 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Liquid.

Physical state Liquid.

Form Liquid. Emulsion

Color Opaque white emulsion

Odor Matches to Standard

Odor threshold Not available.

pH Not available.

Melting point/freezing point 14 °F (-10 °C) estimated

Initial boiling point and boiling range 384.8 °F (196 °C) estimated

Flash point 204.8 °F (96.0 °C) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 0.01 hPa estimated

Vapor density Not available.

Relative density Not available.

Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	400 °F (204.44 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.60 lbs/gal estimated
Flammability class	Combustible IIIB estimated
Percent volatile	79.5 % estimated
pH in aqueous solution	8.6
Pounds per gallon	8.6 lb/gal
Specific gravity	1.03 estimated
VOC (Weight %)	0 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not available.

Product	Species	Test Results
Appearance 2000 (CAS Mixture)		
Acute		
Dermal		
LD50	Rabbit	158429.9063 mg/kg estimated
Oral		
LD50	Mouse	122.9907 g/kg estimated
	Rabbit	67663.5547 mg/kg estimated
	Rat	25523.3418 mg/kg estimated
Other		
LD50	Mouse	7442.0278 mg/kg estimated
	Rat	41121.4961 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

Further information This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
Appearance 2000 (CAS Mixture)			
Aquatic			
Crustacea	EC50	Daphnia	23125000 mg/l, 48 hours estimated
Fish	LC50	Fish	491.3087 mg/l, 96 hours estimated

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

DIETHYLENE GLYCOL MONOETHYL ETHER	-0.54
TRIBUTOXYETHYLPHOSPHATE	3.75

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations All components are listed or exempted from listing on the U.S. EPA TSCA Inventory List. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

AMMONIUM HYDROXIDE (CAS 1336-21-6)	Listed.
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)	Listed.
TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
DIETHYLENE GLYCOL MONOETHYL ETHER	111-90-0	5 - < 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

AMMONIUM HYDROXIDE (CAS 1336-21-6)

US. New Jersey Worker and Community Right-to-Know Act

AMMONIUM HYDROXIDE (CAS 1336-21-6)
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)

US. Pennsylvania Worker and Community Right-to-Know Law

AMMONIUM HYDROXIDE (CAS 1336-21-6)
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)

US. Rhode Island RTK

AMMONIUM HYDROXIDE (CAS 1336-21-6)
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
TRIBUTOXYETHYLPHOSPHATE (CAS 78-51-3)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

16. Other information, including date of preparation or last revision

Issue date	10-16-2014
Revision date	01-27-2015
Version #	02
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Revision Information	Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Toxicological Information: Toxicological Data

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 80.10
Revision Date: January 26, 2016

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Arsenic

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300 **Signal Word** **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 3). Toxic if swallowed (H301). Do not eat, drink or smoke when using this product (P270).

Hazard class: Acute toxicity, inhalation (Category 3). Toxic if inhaled (H331). Avoid breathing dust or fumes (P261).

Hazard class: Carcinogenicity (Category 1). May cause cancer (H350). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).

Hazard class: Chronic hazards to the aquatic environment (Category 1). Very toxic to aquatic life with long lasting effects (H410).

Arsenic is classified as an IARC Group 1-Carcinogenic to Humans and NTP Known To Be Carcinogenic to Humans.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Arsenic	7440-38-2	As	74.92	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312). **If inhaled:** Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If on skin:** Wash with plenty of water (P302+P352). Take off contaminated clothing and wash before reuse (P362). **If swallowed:** Rinse mouth (P330). Immediately call a POISON CENTER or physician (P301+P310).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid. Flammable in the form of dust when exposed to heat or flame or by chemical reactions. When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Wipe up dust with a damp paper towel to avoid generating dust. Place in a sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #10. Store with sulfur and phosphorus.
Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271). Store in a locked poison cabinet.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271). Use personal protective equipment as required.
Exposure guidelines: PEL/TLV 0.01 mg/m^3 (OSHA/ACGIH); IDLH 5 mg/m^3

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Gray powder. Odorless.
Soluble: Nitric acid. Insoluble in water.

Boiling point: 613 °C (Sublimes)
Melting point: 817 °C
Specific gravity: 5.72

SECTION 10 — STABILITY AND REACTIVITY

When heated or on contact with acid or acid fumes, it emits highly toxic fumes. Can react vigorously on contact with oxidizing materials. Hydrogen gas can react with inorganic arsenic to form the highly toxic gas arsine.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Moderately toxic.
Chronic effects: Carcinogen (IARC-1, NTP-known)
Target organs: Skin, lungs.

ORL-RAT LD_{50}: 763 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #27d is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Arsenic; Hazard class: 6.1, Poison; UN number: UN1558.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-148-6). RCRA code D004.

SECTION 16 — OTHER INFORMATION

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 26, 2016

Product Name:HAND SANITIZER ADVANCED **Issue Date:Sep.15th,2019**
Date of revision:Sep,15th,2019

Safety data sheet

Section 1 – Chemical Product and Company Identification
1.1 Procuct identifier

Hand Sanitizer

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:HAND SANITIZER ADVANCED

1.3. Details of the supplier of the safety data sheet

Company:
NINGBO OCEANSTAR CHEMICAL PRODUCTS CO.,LTD
No 38,LVYUAN RAOD, TENGTOU INDUSTRAIL ZONE, FENGHUA, NINGBO,
ZHEJIANG 315000, China (CHN)
Telephone: 0086-574-87659817
Fax:0086-574-87659815
E-mail address: INFO@OCEANSTAR-INC.COM

1.4. Emergency telephone number

International emergency number:
Telephone: +86-13567432010

SECTION 2: Hazards Identification
2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]
Flam. Liq. 2

2.2.Label elements

According to Regulation (EC) No 1272/2008 [CLP]
Pictogram:

Signal Word:
Danger

Hazard Statement:
H225 Highly flammable liquid and vapour

Precautionary Statements (Prevention):
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P280 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements (Response):
Precautionary Statements (Response):
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.
P370 + P378 In case of fire: Use foam extinguisher or carbon dioxide to extinguish.

Precautionary Statements (Storage):
P403 + P235 Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

not applicable

3.2. Mixtures

Registration Numbffer	Classification according to Directive 67/548/EEC	Classification according to Regulation (EU) 1272/2008(CLP)	Concentration
Ethyl alcohol(CAS-No.64-17-5)(EC-No.200-578-6)			
		Flam. Liq. 2,H225	60.0-70.0%
Water(CAS-No.7732-18-5)(EC-No. 231-791-2)			
			10.0-25.0%
2-Propenoic acid，homopolymer (CAS-No.9003-01-4)(EC-No.618-347-7)			
			5.0-15.0%
2,2',2"-nitrilotriethanol(CAS-No.102-71-6)(EC-No. 203-049-8)			
			1.0-5.0%
Glycerol(CAS-No.56-81-5)(EC-No.200-289-5)			
			1.0-5.0%
Aloe vera, ext.(CAS-No.85507-69-3)(EC-No.287-390-8)			
			0.1-1.0%

SECTION 4: First-Aid Measuresf

4.1. Description of first aid measures

If inhaled:
Keep patient calm, remove to fresh air.

On skin contact:
Remove contaminated clothing. Wash thoroughly with soap and water. If irritation develops, seek medical attention.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open. If irritation develops,seek medical attention.

On ingestion:
Rinse mouth and then drink plenty of water. Do not induce vomiting. Seek medical attention if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media
Suitable extinguishing media:
Foam,carbon dioxide, dry powder

5.2. Special hazards arising from the substance or mixture
Vapors may form explosive mixture with air..

5.3. Advice for fire-fighters
Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid contact with the skin, eyes and clothing. Use personal protective clothing.
Information regarding personal protective measures see, section 8.

6.2. Environmental precautions
Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up
Sweep/shovel up. Correctly dispose of recovered product immediately. Do not discharge into drains/surface waters/groundwater.

6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7:Handling and Storage

7.1. Precautions for safe handling
Avoid contact with the skin, eyes and clothing. Wear suitable protective clothing and gloves. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities
Segregate from flammable substances. Segregate from peroxides. Segregate from strong oxidizing agents.Segregate from self-heating sub./,./,./stances.

SECTION 8:Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

No data available

8.2. Exposure controls

Respiratory protection:

Respiratory protection in case of vapor/aerosol release.

Hand protection:

Chemical resistant protective gloves (EN 374)

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

General safety and hygiene measures

Hands and/or face should be washed after work.

SECTION 9:Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	gel
Color:	colorless,clear
Odor:	perfumed
Flashpoint:	no data available
pH value:	no data available
Melting temperature:	no data available
Boiling temperature:	no data available
Evaporation rate:	no data available
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Ignition temperature:	no data available
Density:	no data available
Relative density:	no data available
Relative vapor density (air):	no data available
Partitioning coefficient n-octanol/water (log Kow):	no data available
Self ignition:	no data available
Viscosity, dynamic:	no data available
Explosion hazard:	no data available
Fire promoting properties:	no data available

SECTION 10:Stability and Reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is chemically stable.

10.3. Possibility of hazardous reactions

The product is chemically stable.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Substances to avoid:
oxidizing agents

10.6. Hazardous decomposition products

Possible thermal decomposition products:
carbon oxides, sulfur dioxide, nitrogen oxides

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11. Toxicological information

Acute toxicity

Oral:
Harmful if swallowed

Inhalation:
No data available

Dermal:
No data available

Skin Irritation
Assessment of irritating effects:
No data available

Eye irritation
Assessment of irritating effects:
No data available

Respiratory/Skin sensitization
Assessment of sensitization:
No data available.

Germ cell mutagenicity
Assessment of mutagenicity:
No data available

Carcinogenicity
Assessment of carcinogenicity:
No data available

Reproductive toxicity
Assessment of reproduction toxicity:
No data available

Developmental toxicity
Assessment of teratogenicity:
No data available.

Specific target organ toxicity (single exposure)
Assessment of STOT single:
No data available.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)
Assessment of repeated dose toxicity:
No data available

Aspiration hazard
No data available.

Other relevant toxicity information
According to our present knowledge and experience dangers which are not covered by the current labeling are not to be expected.

SECTION 12:Ecological Information

12.1. Toxicity
Assessment of aquatic toxicity:
Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):
No data available.

Assessment of stability in water:
No data available.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
Discharge into the environment must be avoided.

12.4. Mobility in soil

Assessment transport between environmental compartments:
No data available.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation,Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT(Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).Self classification

12.6. Other adverse effects

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

12.7. Additional information

Other ecotoxicological advice:
According to our present knowledge and experience dangers which are not covered by the current labeling are not to be expected.

SECTION 13:Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.
Contaminated packaging:
Dispose of in accordance with national, state and local regulations.
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

SECTION 14:Transport Information

Land transport

ADR **Not classified as a dangerous good under transport regulations**

UN number:	UN1266
UN proper shipping name:	FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No

RID **Not classified as a dangerous good under transport regulations**

UN number:	UN1266
UN proper shipping name:	FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No

Inland waterway transport

ADN **Not classified as a dangerous good under transport regulations**

UN number:	UN1266
UN proper shipping name:	FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No

Sea transport

IMDG **Not classified as a dangerous good under transport regulations**

UN number:	UN1266
UN proper shipping name:	FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No

Air transport

IATA/ICAO **Not classified as a dangerous good under transport regulations**

UN number:	UN1266

UN proper shipping name:	FLAMMABLE LIQUID PLACARD -- ETHANOL (ETHYL ALCOHOL)
Transport hazard class(es):	3
Packing group:	II
Environmental hazards:	No

14.1. UN number
See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

SECTION 15:Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2. Chemical Safety Assessment

Chemical Safety Assessment not yet performed due to registration timelines. Exposure scenarios for the mixture can not be provided at the moment because exposure scenarios are not yet available for all relevant substances due to registration timelines. For advice on essential measures see sections 7 and 8 of this safety data sheet.

SECTION 16: Other Information

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

SAFETY DATA SHEET

ART-TIME WASHABLE TEMPERA
Issue date: 10/08/2012

SDS ID: 00081012
Revision Date: ---

* * * Section 1 – PRODUCT COMPANY IDENTIFICATION * * *

Product Name: **ART-TIME WASHABLE TEMPERA,**
ART-TIME WASHABLE GLITTER TEMPERA,
ART-TIME WASHABLE FLUORESCENT TEMPERA

SARGENT ART, INC

Phone: 1-800-424-3596

100 East Diamond Ave.
Hazleton, PA 18201
www.sargentart.com

Health Emergency – Call local Poison Control Center

Synonyms: 650 Series; 8oz Art-Time WashableTempera; 16oz Art-Time Washable Tempera; 32oz Art-Time Washable Tempera; 128oz. Art-Time Washable Tempera; 6ct. Washable Primary Set; 12ct. Washable Set (primary & secondary); 630 Series; 8oz Art-Time Washable Glitter Tempera Clear Bottle; 16oz Art-Time Washable Glitter Tempera Clear Bottle Pint; 6ct. Washable Glitter Set; 390 Series; 16oz Art-Time Washable Fluorescent Tempera Pint; 6ct. Washable Fluorescent Set;

Product Codes: 66-5417

Product Use: Arts and Crafts

* * * Section 2 – HAZARD(S) IDENTIFICATION * * *

EMERGENCY OVERVIEW

Color: various colors
Physical Form: liquid

POTENTIAL HEALTH EFFECTS

Inhalation: none
Skin Contact: none
Eye Contact: none
Ingestion: none

* * * Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS * * *

CAS	Component	Percent	Symbol	Risk Phrase(s)
Not Available	Product has been certified as non-toxic by the US Board Certifies Toxicologist and Conforms to ASTM D-4236 standard practice for Labeling Art Materials for acute and chronic adverse health hazards.	100	---	---

* * * Section 4 – FIRST AID MEASURES * * *

Inhalation
It is unlikely that emergency treatment will be required. Remove from exposure. Get medical attention, if needed.

Skin
It is unlikely that emergency treatment will be required. If adverse effects occur, wash with soap or mild detergent and large amounts of water. Get medical attention, if needed.

Eyes
It is unlikely that emergency treatment will be required. Wash with large amounts of water or normal saline until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

Ingestion
Rinse mouth thoroughly with water. Get medical attention if any discomfort occurs.

* * * Section 5 – FIRE FIGHTING MEASURES * * *

See Section 9 for Flammability Properties

NFPA Ratings: Health: 1 **Fire:** 1 **Reactivity:** 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Flammable Properties
Slight fire hazard.

Extinguishing Media
Regular dry chemical, carbon dioxide, water, regular foam

Fire Fighting Measures
Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products.

* * * Section 6 – ACCIDENTAL RELESE MEASURES * * *

Occupational spill/release
Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

* * * Section 7 – HANDLING AND STORAGE * * *

Handling Procedures
Provide adequate ventilation. Wear appropriate protection equipment. Avoid breathing mist or vapor. Avoid contact with eyes and prolonged skin contact. Do not taste or swallow. Keep the workplace clean. Observe good industrial hygiene practices.

Storage Procedures
Store in a well-ventilated place. Store in closed original container at room temperature.

* * * Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION * * *

Component Exposure Limits
ACGIH and EU have not developed exposure limits for any of this product's components.

Ventilation
Based on available information, additional ventilation is not required.

PERSONAL PROTECTIVE EQUIPMENT
Eyes/Face

Eye protection not required under normal conditions.

Protective Clothing
Protective clothing is not required under normal conditions.

Glove Recommendations
Protective gloves are not required under normal conditions.

Respiratory Protection
No respirator is required under normal conditions of use.
Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

* * * Section 9 – PHYSICAL AND CHEMICAL PROPERTIES * * *

Appearance:	Liquid	**Flash Point:**	Not available
Physical State:	Liquid	**Flammability:**	Not available
Physical Form:	Liquid	**Vapor Pressure:**	Not available
Color:	Assorted colors	**Vapor Density (air=1):**	Not available
Odor:	Odorless	**Evaporation Rate:**	Not available
Odor Threshold:	Not available	**Specific Gravity:**	1.13 – 1.18
pH:	<=9.5	**Density:**	9.2 – 9.85 Lbs/Gal
Melting Point:	Not available	**Water Solubility:**	Soluble
Freezing Point:	Not available	**Coeff.Water/Oil Dist:**	Not available
Boiling Point:	Not available	**Volatility:**	Not available
Viscosity:	12000 – 45000 cP		

* * * Section 10 – STABILITY AND REACTIVITY * * *

Chemical Stability
Stable at normal temperatures and pressure.

Conditions to Avoid
None reported.

Materials to Avoid
Oxidizing materials.

Decomposition Products
Oxides of carbon.

Possibility of Hazardous Reactions
Will not polymerize.

* * * Section 11 – TOXICOLOGICAL INFORMATION * * *

Component Analysis – LD50/LC50
The components of this material have been reviewed in various sources and no selected endpoints have been identified.

RTECS Acute Toxicity (selected)
The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Component Carcinogenicity
None of this product's components are listed be ACGIH, IARC, or DFG.

RTECS Irritation

The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

* * * Section 12 – ECOLOGICAL INFORMATION * * *

Component Analysis – Aquatic Toxicity
No LOLI ecotoxicity data is available for this product's components.

* * * Section 13 – DISPOSAL CONSIDERATION * * *

Disposal Methods
Dispose in accordance with all applicable regulations.
Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.

* * * Section 14 – TRANSPORT INFORMATION * * *

US DOT Information:	Not Regulated.
TDG Information:	Not Regulated.
ADR Information:	Not Regulated.
RID Information:	Not Regulated.
IATA Information:	Not Regulated.
ICAO Information:	Not Regulated.
IMDG Information:	Not Regulated.

* * * Section 15 – REGULATORY INFORMATION * * *

U.S. Federal Regulations
None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: No **Chronic Health:** No **Fire:** No **Pressure:** No **Reactive:** No
U.S. State Regulations
None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA.

Not regulated under California Proposition 65

Canada
This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.
WHMIS CLASSIFICATION: Not a Controlled Product under Canada's Workplace Hazardous Material Information System.
Component Analysis – Inventory
No information is available.

* * * Section 16 – OTHER INFORMATION * * *

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR – European Road Transport; AU – Australia; BOD – Biochemical Oxygen Demand; C – Celsius; CA – Canada; CAS – Chemical Abstracts Service; CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act; CN – China; CPR – Controlled Products Regulations; DFG – Deutsche Forschungsgemeinschaft; DOT – Department of Transportation; DSL – Domestic Substances List; EEC – European Economic Community; EINECS – European Inventory of Existing Commercial Chemical Substances; EPA – Environmental Protection Agency; EU – European Union; F – Fahrenheit; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; ICAO – International Civil Agency Organization; IDL – Ingredient Disclosure List; IDLH – Immediately Dangerous to Life and Health; IMDG – International Maritime Dangerous Goods; JP – Japan; Kow – Octanol/water partition coefficient; KR – Korea; LEL – Lower Explosive Limit; LOLI – List Of Lists – ChemADVIUSOR's Regulatory Database; MAK – Maximum Concentration Value in the Workplace; MEL – Maximum Exposure Limits; NFPA – National Fire Protection Agency; NIOSH – National Institute for Occupational Safety and Health; NJTSR – New Jersey Trade Secret Registry; NTP – National Toxicology Program; NZ – New Zealand; OSHA – Occupational Safety and Health Administration; PH Philippines; RCRA – Resource Conservation and Recovery Act; RID – European Rail Transport; RTECS – Registry of Toxic Effects of Chemical Substances; SARA – Superfund Amendments and Reauthorization Act; STEL – Short-term Exposure Limit; TDG – Transportation of Dangerous Goods; TSCA – Toxic Substances Control Act; TWA – Time Weighted Average; UEL – Upper Explosive Limit; US – United States.

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

MATERIAL SAFETY DATA SHEET

ARTIST'S LOFT ACRYLIC PAINT

1. Product and Company Identification

Revision date	07-08-2011
Version #	01
CAS #	Mixture
Product code	SKU 125734, UPC 400100660454
Product use	Paint.
Manufacturer/Supplier	Artmate Co, Ltd 50 Zhonghua Road Nanjing, China lvjihong@jabp.com Telephone Number: 86-25-52852684 Contact Person: Ella LU
Emergency	Emergency Telephone Number: 86-25-52852743

2. Hazards Identification

Physical state	Liquid.
Appearance	Paste.
Emergency overview	Not regarded as a health or environmental hazard under current legislation.
OSHA regulatory status	This product is not hazardous according to OSHA 29CFR 1910.1200.
Potential health effects	
Routes of exposure	Skin contact. Eye contact. Ingestion. Inhalation.
Eyes	Direct contact with eyes may cause temporary irritation.
Skin	Prolonged skin contact may cause temporary irritation.
Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Ingestion	Ingestion may cause irritation and malaise.
Chronic effects	Inhalation of carbon black or titanium dioxide dust may cause cancer, however due to the physical form of the product, inhalation of dust is not likely.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Carbon black	1333-86-4	0-25
C.I. Pigment blue 29	57455-37-5	0-20
Iron oxide	1309-37-1	0-20
Titanium dioxide (TiO2)	13463-67-7	0-15
Aluminium hydroxide	21645-51-2	1-10
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	0-10
Silicon dioxide	7631-86-9	0-10
Glycerin	56-81-5	1-5

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The product contains additional elements at concentrations below disclosure requirements.

4. First Aid Measures

First aid procedures

Eye contact	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention promptly if symptoms occur after washing.
Skin contact	Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

Inhalation	If symptomatic, move to fresh air. Get medical attention if symptoms persist.
Ingestion	Rinse mouth thoroughly with water and give large amounts of milk or water, if person is conscious. Get medical attention if any discomfort continues.
Notes to physician	Treat symptomatically.

5. Fire Fighting Measures

Flammable properties	This product is not flammable.
Extinguishing media	
Suitable extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Fire fighting equipment/instructions	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Hazardous combustion products	During fire, gases hazardous to health may be formed.

6. Accidental Release Measures

Personal precautions	Wear appropriate personal protective equipment (See Section 8).
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Methods for cleaning up	Absorb spill with vermiculite or other inert material, then place in a sealed container for chemical waste. Used rags or other cleaning materials should be soaked with water and placed in a sealed container. Large Spills: Flush area with water. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Observe good industrial hygiene practices.
Storage	Keep container closed. Store in a cool place.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminium hydroxide (21645-51-2)	TWA	1 mg/m3	Respirable fraction.
C.I. Pigment blue 29 (57455-37-5)	TWA	10 mg/m3	INHALABLE PARTICLES
		3 mg/m3	RESPIRABLE PARTICLES
Carbon black (1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
Glycerin (56-81-5)	TWA	10 mg/m3	Mist.
Iron oxide (1309-37-1)	TWA	5 mg/m3	Respirable fraction.
Titanium dioxide (TiO2) (13463-67-7)	TWA	10 mg/m3	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Carbon black (1333-86-4)	PEL	3.5 mg/m3	
Glycerin (56-81-5)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Iron oxide (1309-37-1)	PEL	10 mg/m3	Fume.
Silicon dioxide (7631-86-9)	TWA	20 mppcf	
		0.8 mg/m3	
Titanium dioxide (TiO2) (13463-67-7)	PEL	15 mg/m3	Total dust.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Carbon black (1333-86-4)	TWA	3.5 mg/m3	
Glycerin (56-81-5)	TWA	10 mg/m3	Mist.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Iron oxide (1309-37-1)	TWA	5 mg/m3	Respirable.
Titanium dioxide (TiO2) (13463-67-7)	TWA	10 mg/m3	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Aluminium hydroxide (21645-51-2)	TWA	1 mg/m3	Respirable.
Carbon black (1333-86-4)	TWA	3.5 mg/m3	
Glycerin (56-81-5)	TWA	3 mg/m3	Respirable mist.
		10 mg/m3	Mist.
Iron oxide (1309-37-1)	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Dust.
		10 mg/m3	Total dust.
		3 mg/m3	Respirable fraction.
		5 mg/m3	Fume.
Silicon dioxide (7631-86-9)	TWA	4 mg/m3	Total
		1.5 mg/m3	Respirable.
Titanium dioxide (TiO2) (13463-67-7)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.

Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Carbon black (1333-86-4)	TWA	3.5 mg/m3	
Glycerin (56-81-5)	TWA	10 mg/m3	Mist.
Iron oxide (1309-37-1)	TWA	5 mg/m3	Respirable.
Silicon dioxide (7631-86-9)	TWA	10 mg/m3	
Titanium dioxide (TiO2) (13463-67-7)	TWA	10 mg/m3	Total dust.

Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Carbon black (1333-86-4)	TWA	3.5 mg/m3	
Glycerin (56-81-5)	TWA	10 mg/m3	Mist.
Iron oxide (1309-37-1)	TWA	10 mg/m3	Total dust.
		5 mg/m3	Dust and fume.
Silicon dioxide (7631-86-9)	TWA	6 mg/m3	Respirable dust.
Titanium dioxide (TiO2) (13463-67-7)	TWA	10 mg/m3	Total dust.

Mexico. Occupational Exposure Limit Values

Components	Type	Value	Form
Carbon black (1333-86-4)	STEL	7 mg/m3	
	TWA	3.5 mg/m3	
Glycerin (56-81-5)	TWA	10 mg/m3	Mist.
Iron oxide (1309-37-1)	STEL	10 mg/m3	
	TWA	5 mg/m3	
Titanium dioxide (TiO2) (13463-67-7)	STEL	20 mg/m3	
	TWA	10 mg/m3	

Engineering controls Ensure adequate ventilation, especially in confined areas. Exposure limits apply to material in dry form where dust may become airborne.

Personal protective equipment

Eye / face protection Wear safety glasses with side shields (or goggles).

Skin protection Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.

Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical & Chemical Properties

Appearance	Paste.
Color	Variable in color.
Odor	Not available.
Odor threshold	Not available.
Physical state	Liquid.
Form	Paste.
pH	6 - 7
Melting point	Not available.
Freezing point	Not available.
Boiling point	212 °F (100 °C)
Flash point	> 932 °F (> 500 °C)
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	1.2 - 1.3 (20-30°C)
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Excessive heat.
Incompatible materials	Strong oxidizing agents. Strong acids. Phenol.
Hazardous decomposition products	No hazardous decomposition products are known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Product	Test Results
12 PIECE WATERCOLOR PAINT SET (Mixture)	Acute Dermal LD50 Rabbit: 64199.9615 mg/kg estimated Acute Dermal LD50 Rabbit: 51.3602 g/kg estimated Acute Inhalation LC Rat: 194.5959 mg/l estimated Acute Oral LD50 Rat: 20563.1669 mg/kg estimated Acute Other LD50 Rat: 42799.8911 mg/kg estimated

Acute effects	Ingestion may cause irritation and malaise.

Local effects	Prolonged skin contact may cause temporary irritation.
Sensitization	No sensitizing effects known.
Carcinogenicity	Inhalation of carbon black or titanium dioxide dust may cause cancer, however due to the physical form of the product, inhalation of dust is not likely.

ACGIH Carcinogens

Aluminium hydroxide (CAS 21645-51-2)	A4 Not classifiable as a human carcinogen.
Carbon black (CAS 1333-86-4)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Iron oxide (CAS 1309-37-1)	A4 Not classifiable as a human carcinogen.
Titanium dioxide (TiO2) (CAS 13463-67-7)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
Iron oxide (CAS 1309-37-1)	3 Not classifiable as to carcinogenicity to humans.
Silicon dioxide (CAS 7631-86-9)	3 Not classifiable as to carcinogenicity to humans.
Titanium dioxide (TiO2) (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

Mutagenicity	Not classified.
Reproductive effects	Not classified.

12. Ecological Information

Ecotoxicological data

Product	Test Results
12 PIECE WATERCOLOR PAINT SET (Mixture)	LC50 Fish: 28311.062 mg/l 96 hours estimated

Ecotoxicity	Not expected to be harmful to aquatic organisms.
Persistence and degradability	No data available.
Bioaccumulation / Accumulation	No data available.
Partition coefficient (n-octanol/water)	Not available.
Mobility in environmental media	No data available.

13. Disposal Considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is not hazardous according to OSHA 29CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification(40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance (40 CRF 355, Appendix A)	No
Section 311/312 (40 CFR 370)	No
Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)	Not controlled
WHMIS status	Controlled
WHMIS classification	D2A - Other Toxic Effects-VERY TOXIC

WHMIS labeling

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Hazardous Substances (Director's): Listed substance

Carbon black (CAS 1333-86-4)	Listed.
Iron oxide (CAS 1309-37-1)	Listed.
Silicon dioxide (CAS 7631-86-9)	Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Carbon black (CAS 1333-86-4)	Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Carbon black (CAS 1333-86-4)	Listed: February 21, 2003 Carcinogenic.

US - Massachusetts RTK - Substance: Listed substance

Carbon black (CAS 1333-86-4)	Listed.
Glycerin (CAS 56-81-5)	Listed.
Iron oxide (CAS 1309-37-1)	Listed.
Silicon dioxide (CAS 7631-86-9)	Listed.
Titanium dioxide (TiO2) (CAS 13463-67-7)	Listed.

US - New Jersey RTK - Substances: Listed substance

29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper (CAS 147-14-8)	Listed.
Carbon black (CAS 1333-86-4)	Listed.
Glycerin (CAS 56-81-5)	Listed.
Iron oxide (CAS 1309-37-1)	Listed.

Silicon dioxide (CAS 7631-86-9)	Listed.
Titanium dioxide (TiO2) (CAS 13463-67-7)	Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Carbon black (CAS 1333-86-4)	Listed.
Glycerin (CAS 56-81-5)	Listed.
Iron oxide (CAS 1309-37-1)	Listed.
Silicon dioxide (CAS 7631-86-9)	Listed.
Titanium dioxide (TiO2) (CAS 13463-67-7)	Listed.

16. Other Information

HMIS® ratings	Health: 1* Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 1 Instability: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.
Issue date	07-08-2011

MATERIAL SAFETY DATA SHEET
GLITTER PLASTIC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER / SUPPLIER

GLITTEREX Corporation
7 Commerce Drive
Cranford, NJ 07016

Telephone: (908) 272-9121

PRODUCT NAME: ARTS AND CRAFTS GLITTER
PRODUCT DESCRIPTION: PVC GLITTER
PRODUCT USE: DECORATIVE APPLICATIONS

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPOSITION	APPROX. WT. %	CAS REG. NO.
Metallized polyvinyl chloride film Rigid film – contains no Phthalates	(Proprietary)	25085-82-9

3. HAZARDS

FLAMMABILITY-FLASH POINT ABOVE 200 DEGREES F
HEALTH – NON TOXIC ACMHAP CERTIFIED
CHEMICAL REACTIVITY – SEE SECTION 10

4. FIRST AID MEASURES

INHALATION: Not usual route of entry.

EYES: Any material that contacts the eye should be washed out with water. Get medical attention if symptoms persist.

SKIN: Wash with soap and water.

INGESTION: Material is not expected to be absorbed from the gastrointestinal tract, so that induction of vomiting should not be necessary.

5. FIRE FIGHTING MEASURES

FIRE FIGHTING: Approved self-contained breathing apparatus and protective clothing should be used for all fires.

EXTINGUISHING MEDIA: Water, fog, carbon dioxide, dry chemical.

HAZARDOUS COMBUSTION PRODUCTS: Heated to decomposition, normal products of combustion will be formed.

FLASH POINT:	ABOVE 200 DEGREES F
LOWER FLAMMABLE LIMIT:	NOT ESTABLISHED
UPPER FLAMMABLE LIMIT:	NOT ESTABLISHED
AUTO IGNITION TEMPERATURE:	NOT AVAILABLE

EXPLOSION DATA:	
IMPACT SENSITIVITY:	NOT SENSITIVE TO MECHANICAL IMPACT
STATIC DISCHARGE:	NOT SENSITIVE TO STATIC DISCHARGE

6. ACCIDENTAL RELEASE MEASURES

Sweep or gather up material and place in proper container.

7. HANDLING AND STORAGE

HANDLING: No special precautionary measures should be needed under anticipated conditions of use. Minimize dust generation and accumulation. Refer to NFPA Pamphlet No. 654, "Prevention of fire and dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries."

STORAGE: Store away from excessive heat and sources of ignition. No other precautionary measures should be needed under anticipated conditions of use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT INFORMATION:

VENTILATION: Good general ventilation should be used.

EYE PROTECTION: Use safety glasses.

SKIN PROTECTION: Wear cotton, canvas or leather gloves.

RESPIRATORY: When dust or powder from secondary operations are not adequately controlled, use respirator approved for protection from dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	GLITTER
COLOR:	VARIOUS COLORS
ODOR:	MILD
MELTING POINT:	ABOVE 180 DEGREES F
VAPOR PRESSURE:	NEGLIGIBLE
VAPOR DENSITY (AIR=1):	NOT APPLICABLE
SPECIFIC GRAVITY (WATER=1):	1.35 TO 1.45
WATER SOLUBILITY:	INSOLUBLE
% VOLATILES:	NEGLIGIBLE
pH:	NOT APPLICABLE
EVAPORATION RATE:	NOT APPLICABLE

10. STABILITY AND REACTIVITY

STABILITY: Stable under recommended conditions of storage and handling.

REACTIVITY: Avoid contact with acids, alkalis and strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

EYES: Product not considered primary eye irritant, and expected to be a low hazard for usual industrial or commercial handling by trained personnel.

SKIN: Product not considered to be primary skin irritant.

INGESTION: Expected to be a low ingestion hazard.

INHALATION: Product not considered a hazard for usual handling by trained personnel.

12. ECOLOGICAL INFORMATION

Not expected to present any adverse environmental effects.

13. DISPOSAL INFORMATION

Product is not a RCRA hazardous waste. Landfill or incinerate in accordance with federal, state or local requirements.

14. TRANSPORTATION INFORMATION

US DOT HAZARD CLASSIFICATION: Not Regulated.

15. REGULATORY INFORMATION

OSHA hazardous chemical(s) according to 29 CFR 1910.1200: None.
WHMIS (Canada) Status: Not a controlled product.
WHMIS (Canada) Ingredients Disclosure List: None.
Chemical(s) subject to the reporting requirements of Section 313 or Title III of SARA of 1986 and 4OCFR 372: None.
SARA Sections 311 and 312 hazard classification(s): N/A.
US Toxic Substances Control Act (TSCA): All Components of this product are listed or are excluded from listing on the TSCA Chemical Substance Inventory.
Material(s) known to the State of California to cause cancer: None
Material(s) known to the State of California to cause adverse reproductive effects: None
New Jersey Workplace Hazardous Substance List: None
Pennsylvania Hazardous Substance List: None

16. OTHER INFORMATION

The above information and recommendations are believed accurate and reliable. The GLITTEREX Corporation makes no warranty of any kind, either express or implied, including merchantability and fitness. Users should consider these data only as a supplement to other information available from all sources, and should incorporate these into programs for the proper use and disposal of these materials and the safety and health of employees and customers.

MATERIAL SAFETY DATA SHEET

ATHLETIC FIELD MARKING WHITE

1. Product And Company Identification

Supplier
Athletic Specialties, Inc.
240 Industrial Drive
Wauconda, IL 60084 USA

Company Contact: Carey D. Brunelli
Telephone Number: 800-779-0990
FAX Number: 800-493-2565
E-Mail: sales@asisports.com
Web Site: www.asisports.com

Supplier Emergency Contacts & Phone Number
None Given

Issue Date: 02/27/2006

Product Name: ATHLETIC FIELD MARKING WHITE
Chemical Name: 6-5858-5
CAS Number: Not Established
MSDS Number: 3564
Product Code: 429-1450-5
Product/Material Uses - Spray Paint

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
BUTANE	106-97-8		1 - 5
CALCIUM CARBONATE	471-34-1		10 - 15
LIGHT AROMATIC NAPHTHA	64742-95-6		1 - 5
MINERAL SPIRITS	8052-41-3		1 - 5
PROPANE	74-98-6		5 - 10
TITANIUM DIOXIDE	13463-67-7		5 - 10
TOLUENE	108-88-3		10 - 15
V.M. & P. NAPHTHA	64742-89-8		1 - 5
XYLENE (MIXED ISOMERS)	1330-20-7		1 - 5

Non-hazardous components: Water 40-45%
Hazardous components, according to OSHA, are listed when present at 1.0% or greater. Carcinogens are listed when present at 0.1% or greater.

3. Hazards Identification

Primary Route(s) Of Entry - Ingestion (possible, but considered unlikely), eye contact, skin contact, inhalation.
Eye Hazards - Causes eye irritation.
Skin Hazards - Causes skin irritation.
Ingestion Hazards - This is an aerosol product, ingestion is unlikely to occur. Contains petroleum distillate, harmful if swallowed. If accidentally swallowed, do not induce vomiting. Call physician immediately.
Inhalation Hazards - Deliberate inhalation of concentrate vapor or mist may cause headache, dizziness and nausea. If dust is formed during use, breathing too much dust may cause irritation of the nose, throat and lungs.
Chronic/Carcinogenicity Effects - Toluene and xylene have been associated with kidney and liver disorders. Contains less than 0.1% ethyl benzene; IARC has evaluated and classified ethyl benzene as a possible human

MATERIAL SAFETY DATA SHEET

ATHLETIC FIELD MARKING WHITE

3. Hazards Identification - Continued

carcinogen (group 2B) based on sufficient evidence of carcinogenicity in animals, but inadequate evidence for cancer in exposed humans. This product may contain up to 0.1% crystalline silica (quartz). California's Proposition 65: "Warning: This product contains chemicals known to the State of California to cause cancer"

Teratogenicity (Birth Defects) - California's Proposition 65: "Warning: this product contains toluene, a chemical known to the State of California to cause birth defects or other reproductive harm".

Reproductive Effects - Suspect reproductive hazard. Contains material which may cause birth defects, based on animal data. This product contains toluene.

Neurotoxicity - Not known

Mutagenicity (Genetic Effect) - Not known

Signs And Symptoms - Acute: Prolonged inhalation of vapor or mist may cause headache, dizziness and nausea. Breathing too much dust may cause irritation of the nose, throat and lungs. Prolonged contact with the skin causes irritation. Irritant to eyes.

Conditions Aggravated By Exposure - Pre-existing skin, respiratory, liver and kidney disorders.

Conditions Aggravated By Overexposure - Pre-existing skin, respiratory, liver and kidney disorders.

First Aid (Pictograms)

4. First Aid Measures

Eye - Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin - Wash skin with soap and water. If irritation develops, consult a physician.

Ingestion - Ingestion from an aerosol product is unlikely to occur. Contains petroleum distillates. Harmful if swallowed. If accidentally swallowed, do not induce vomiting, call physician immediately.

Inhalation - If overcome by vapor move victim to fresh air. If person is not breathing, call 911 or an ambulance, then provide artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advise.

5. Fire Fighting Measures

Flash Point: Not available °F Not available °C
Flash Point Method: Not available
Lower Explosive Limit: Not available
Upper Explosive Limit: Not available

Fire And Explosion Hazards - This product is an aerosol product for which Flame Projection is over 18 in, with flashback. Temperatures above 120 F may cause cans to burst.

Extinguishing Media - Use CO2 (Carbon Dioxide), dry chemical, or water fog.

Fire Fighting Instructions - Water spray may be used to cool cans in the vicinity of fire or excessive heat.

6. Accidental Release Measures

Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

6. Accidental Release Measures - Continued

Handling & Storage (Pictograms)

7. Handling And Storage

Handling And Storage Precautions - Handle as an extremely flammable material. Store in a cool, dry place away from heat and open flame.
Handling Precautions - Avoid getting spray into eyes. Keep out of reach of children.
Storage Precautions - Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity).
AEROSOL STORAGE LEVEL III (NFPA-30B)
Work/Hygienic Practices - Wash hands thoroughly after using this product.

Protective Clothing (Pictograms)

8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation.
Eye/Face Protection - Conventional eyeglasses to guard against splashing.
Skin Protection - Rubber, vinyl or household type gloves.
Respiratory Protection - Use in well-ventilated area ONLY. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. To avoid breathing vapor or spray mist, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or use an appropriate, properly fitted respirator (NIOSH approved), or leave the area. NOTE: Follow respirator manufacturer's instructions carefully.

Ingredient(s) - Exposure Limits
BUTANE
ACGIH TLV-TWA 800 ppm
CALCIUM CARBONATE
ACGIH TLV-TWA 10 mg/m3 ; OSHA PEL-TWA 15 mg/m3 ; OSHA PEL-TWA 5 mg/m3
LIGHT AROMATIC NAPHTHA
50PPM Recommended by the manufacturer.
MINERAL SPIRITS
ACGIH TLV-TWA 100ppm ; OSHA PEL-TWA 500ppm
PROPANE
ACGIH TLV-TWA 2500 ppm ; OSHA PEL-TWA 1,000 ppm
TITANIUM DIOXIDE
ACGIH TLV-TWA 10 mg/m3 ; OSHA PEL-TWA 15 mg/m3
TOLUENE
ACGIH TLV-TWA 50 ppm (Skin) ; OSHA PEL-CEILING 300 ppm ; OSHA PEL-PEAK 500 ppm
OSHA PEL-TWA 200 ppm
V.M. & P. NAPHTHA
ACGIH TLV-TWA 300 ppm
XYLENE (MIXED ISOMERS)
ACGIH TLV-STEL 150 ppm ; ACGIH TLV-TWA 100 ppm ; OSHA PEL-TWA 100 ppm

MATERIAL SAFETY DATA SHEET

ATHLETIC FIELD MARKING WHITE

9. Physical And Chemical Properties

Appearance - Appearance of paint.
Odor - Paint odor.

Chemical Type: Mixture
Physical State: Liquid
Melting Point: Not applicable °F Not applicable °C
Boiling Point: Water 212 °F Water 100 °C
Specific Gravity: 1.168
Percent VOCs: 32.93
Solubility: Insoluble
Evaporation Rate: Faster than butyl acetate

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability) - Temperatures above 120 F
Incompatible Materials - Avoid heat, open flame and contact with strong oxidizers.
Hazardous Decomposition Products - Thermal decomposition may yield gases like carbon monoxide, carbon dioxide, and calcium oxide.
Conditions To Avoid (Polymerization) - Temperatures above 120 F

11. Toxicological Information

No Data Available...

12. Ecological Information

Ecotoxicological Information - No specific ecological data is available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

13. Disposal Considerations

Do not puncture or incinerate container. If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency for disposal instructions.

14. Transport Information

Proper Shipping Name - ORM-D Consumer Commodity

Hazard Class
2.1

DOT Identification Number
UN1950

DOT Shipping Label
Aerosol Consumer Commodity

15. Regulatory Information

U.S. Regulatory Information - All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

15. Regulatory Information - Continued

SARA Hazard Classes
Acute Health Hazard; Chronic Health Hazard; Fire Hazard

SARA Section 313 Notification - This product contains the following toxic chemicals (above the *de minimis* level) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material. This product contains Toluene and xylene. See section 2 for % amounts in the product.

Ingredient(s) - U.S. Regulatory Information
TOLUENE
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical; SARA - Acute Health Hazard; SARA - Chronic Health Hazard; SARA - Fire Hazard

XYLENE (MIXED ISOMERS)
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical; SARA - Acute Health Hazard; SARA - Chronic Health Hazard; SARA - Fire Hazard

Ingredient(s) - State Regulations
BUTANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

CALCIUM CARBONATE
Pennsylvania - Workplace Hazard

PROPANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

TITANIUM DIOXIDE
New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; New York City - Hazardous Substance

TOLUENE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Pennsylvania - Environmental Hazard; California - Proposition 65; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

V.M. & P. NAPHTHA
New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; New York City - Hazardous Substance

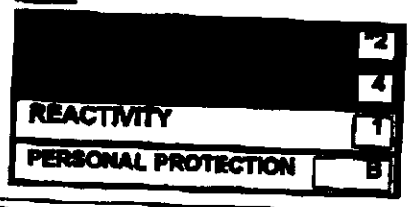
XYLENE (MIXED ISOMERS)
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Pennsylvania - Environmental Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

MATERIAL SAFETY DATA SHEET

ATHLETIC FIELD MARKING WHITE

NFPA

HMIS



16. Other Information

Revision/Preparer Information

MSDS Preparer: Laura E. Radavski
MSDS Preparer Phone Number: 708-865-1000
This MSDS Supercedes A Previous MSDS Dated: 04/28/2005

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

Athletic Specialties, Inc.

Audio Wipe
Safety Data Sheet

SECTION 1: Product and company identification

Product name	:	Audio Wipe
Use of the substance/mixture	:	Premoistened wipe
Product code	:	1574
Company	:	Oaktree Products Inc. 610 Spirit Valley East Drive Chesterfield, MO 63005 - USA T 800-347-1960
Emergency number	:	800-347-1960

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	GHS-US classification
BENZALKONIUM CHLORIDE	(CAS No) 68391-01-5	0.1 - 1.0	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 STOT SE 2, H371 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	(CAS No) 85409-23-0	0.1 - 1.0	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Aquatic Chronic 1, H410

A specific chemical identity and/or percentage of composition has been withheld as a trade secret. Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	:	If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	:	Remove the victim into fresh air.
First-aid measures after skin contact	:	Rinse skin with water/shower.
First-aid measures after eye contact	:	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	:	Rinse mouth with water. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	:	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after inhalation	:	None under normal use.
Symptoms/injuries after skin contact	:	Contact during a long period may cause light irritation.
Symptoms/injuries after eye contact	:	Direct contact with the eyes is likely irritating.
Symptoms/injuries after ingestion	:	Gastrointestinal complaints.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : All extinguishing media allowed.

5.2. Special hazards arising from the substance or mixture

Reactivity : Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel

Protective equipment : Protective goggles. Gloves. Protective clothing.

Emergency procedures : Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Stop leak if safe to do so. Stop release. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers.

Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing.

Hygiene measures : Wash thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container closed when not in use.

Incompatible products : Oxidizing agent.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents.

Storage area : Meet the legal requirements. Store in a cool area. Store in a well-ventilated place.

Special rules on packaging : meet the legal requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Use appropriate personal protective equipment when risk assessment indicates this is necessary. Gloves. Safety glasses. Protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Premoistened wipe impregnated with a liquid.
Odor	:	Pleasant scent
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 200 °F - Tested using the liquid component of the towelette
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	No data available
Relative vapor density at 20 °C	:	No data available
Specific gravity / density	:	1 g/ml - Tested using the liquid component of the towelette
Solubility	:	Liquid component is soluble in water.
Log Pow	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
VOC content	:	< 0.5 % - Tested using the liquid component of the towelette

SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO2 are formed.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified
Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified

Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Symptoms/injuries after inhalation	:	None under normal use.
Symptoms/injuries after skin contact	:	Contact during a long period may cause light irritation.
Symptoms/injuries after eye contact	:	Direct contact with the eyes is likely irritating.
Symptoms/injuries after ingestion	:	Gastrointestinal complaints.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	:	Do not flush wipes.
Waste disposal recommendations	:	Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT : Not regulated for transport

Additional information

Other information	:	No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

California Proposition 65 - This product does not contain substances known to the state of California to cause cancer and/or reproductive toxicity.

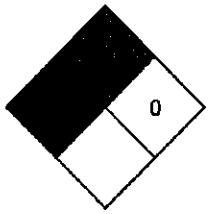
SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H-phrases:

H301	Toxic if swallowed
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H330	Fatal if inhaled
H371	May cause damage to organs
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard	:	1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard	:	1 - Must be preheated before ignition can occur.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Prepared by: Technical Department

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