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SAFETY DATA SHEET

Issuing Date 09-Dec-2015

Revision Date 09-Dec-2015

Revision Number 3



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

Product identifier

Product Name UHU White Glue Stic

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Glue sticks

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Saunders Mfg. Co., Inc.

Supplier Address 65 Nickerson Hill Road
Readfield
Maine
04355
US

Supplier Phone Number Phone:2076853385
Fax:2076859918

Supplier Email marketing@saunders-usa.com

Emergency telephone number

Company Emergency Phone Number 2076853385

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).



GHS Label elements, including precautionary statements**Emergency Overview**

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance White**Physical state** Solid**Odor** Characteristic**Precautionary Statements - Prevention**

None

Precautionary Statements - Response

None

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

None

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

29.44 % of the mixture consists of ingredient(s) of unknown toxicity

Other information

May cause slight eye irritation

Interactions with Other Chemicals

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%	Trade Secret
Third Party Formulation (TP # 1297486)	Trade Secret	7 - 13	*
Third Party Formulation (TP # 1297486)	Trade Secret	1 - 5	*

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

4. FIRST AID MEASURES**First aid measures****Eye contact**

Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a



	physician.
Skin contact	Wash with soap and water.
Inhalation	Remove to fresh air.
Ingestion	Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed.

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
Third Party Formulation (TP # 1297486)	TWA: 10 mg/m ³ mist	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	

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

Appropriate engineering controls

Engineering Measures Showers



Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection	No special protective equipment required.
Skin and body protection	No special protective equipment required.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Solid	Odor	Characteristic
Appearance	White	Odor Threshold	No information available
Color	No information available		
<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	No data available	None known	
Melting / freezing point	No data available	None known	
Boiling point / boiling range	No data available	None known	
Flash Point	No data available	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air			
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Specific Gravity	No data available	None known	
Water Solubility	Soluble in water	None known	
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water	No data available	None known	
Autoignition temperature	No data available	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		
<u>Other Information</u>			
Softening Point	No data available		
VOC Content (%)	No data available		
Particle Size	No data available		
Particle Size Distribution			

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 None known.
 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
 Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Third Party Formulation (TP # 1297486)		96h LC50: 51 - 57 mL/L (Oncorhynchus mykiss)		24h EC50: > 500 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Chemical name	Log Pow
Third Party Formulation (TP # 1297486)	-1.76

Other adverse effects

No information available.



13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Dispose of contents/containers in accordance with local regulations.

California Hazardous Waste Codes 281

14. TRANSPORT INFORMATION

<u>DOT</u>	NOT REGULATED
Proper Shipping Name	NON REGULATED
Hazard Class	N/A

<u>TDG</u>	Not regulated
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<u>MEX</u>	Not regulated
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<u>ICAO</u>	Not regulated
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<u>IATA</u>	Not regulated
Proper Shipping Name	NON REGULATED
Hazard Class	N/A

<u>IMDG/IMO</u>	Not regulated
Hazard Class	N/A

<u>RID</u>	Not regulated
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<u>ADR</u>	Not regulated
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<u>ADN</u>	Not regulated
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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	No
Chronic Health Hazard	No
Fire Hazard	No
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, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

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
Third Party Formulation (TP # 1297486)		X	X		
Third Party Formulation (TP # 1297486)	X	X	X		

International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Third Party Formulation (TP # 1297486) (7 - 13)	-	10mg/m ³ (mist) TWA

Mexico - Occupational Exposure Limits - Carcinogens

Canada

WHMIS Hazard Class

Not determined

16. OTHER INFORMATION

NFPA	Health Hazards	1	Flammability	0	Instability	0	Physical and Chemical Hazards - Personal Protection
HMIS	Health Hazards	1	Flammability	0	Physical Hazard	0	
							X



Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
Issuing Date	09-Dec-2015
Revision Date	09-Dec-2015
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

Revision Date: 04-Jan-2019

Revision Number: 4

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name ULTRA SPEC 500 INTERIOR FLAT BASE 4
Product Code N5364X
Alternate Product Code N5364X
Product Class WATER THINNED PAINT
Color All
Recommended use Paint
Restrictions on use No information available

Manufacturer
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
Phone: 1-866-708-9180
www.benjaminmoore.com

Emergency Telephone
CHEMTREC (US): 800-424-9300
CHEMTREC (outside US): (703)-527-3887

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Appearance liquid

Odor little or no odor

Hazards not otherwise classified (HNOC)

Not applicable

Other information

No information available

3. COMPOSITION INFORMATION ON COMPONENTS

Chemical name	CAS No.	Weight-%
Limestone	1317-65-3	25 - 30
Diatomaceous earth	61790-53-2	1 - 5

4. FIRST AID MEASURES

General Advice	No hazards which require special first aid measures.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.
Most Important Symptoms/Effects	None known.
Notes To Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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.
Specific Hazards Arising From The Chemical	Closed containers may rupture if exposed to fire or extreme heat.
Sensitivity To Mechanical Impact	No
Sensitivity To Static Discharge	No
Flash Point Data	
Flash Point (°F)	Not applicable
Flash Point (°C)	Not applicable
Method	Not applicable
Flammability Limits In Air	
Lower flammability limit:	Not applicable
Upper flammability limit:	Not applicable

NFPA **Health:** 1 **Flammability:** 0 **Instability:** 0 **Special:** Not Applicable

NFPA Legend

- 0 - Not Hazardous
- 1 - Slightly
- 2 - Moderate
- 3 - High
- 4 - Severe

The ratings assigned are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.

Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions** Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
- Other Information** Prevent further leakage or spillage if safe to do so.
- Environmental precautions** See Section 12 for additional Ecological Information.
- Methods for Cleaning Up** Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

- Handling** Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. In case of insufficient ventilation, wear suitable respiratory equipment.
- Storage** Keep container tightly closed. Keep out of the reach of children.
- Incompatible Materials** No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL
Limestone	N/E	15 mg/m ³ - TWA 5 mg/m ³ - TWA
Diatomaceous earth	N/E	- 20 mppcf - TWA

Legend

ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
 OSHA - Occupational Safety & Health Administration Exposure Limits
 N/E - Not Established

- Engineering Measures** Ensure adequate ventilation, especially in confined areas.
- Personal Protective Equipment**
 - Eye/Face Protection** Safety glasses with side-shields.
 - Skin Protection** Protective gloves and impervious clothing.
 - Respiratory Protection** In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures

Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Odor	little or no odor
Odor Threshold	No information available
Density (lbs/gal)	10.6 - 10.7
Specific Gravity	1.27 - 1.29
pH	No information available
Viscosity (cps)	No information available
Solubility(ies)	No information available
Water solubility	No information available
Evaporation Rate	No information available
Vapor pressure @20 °C (kPa)	No information available
Vapor density	No information available
Wt. % Solids	50 - 60
Vol. % Solids	40 - 50
Wt. % Volatiles	40 - 50
Vol. % Volatiles	50 - 60
VOC Regulatory Limit (g/L)	0
Boiling Point (°F)	212
Boiling Point (°C)	100
Freezing Point (°F)	32
Freezing Point (°C)	0
Flash Point (°F)	Not applicable
Flash Point (°C)	Not applicable
Method	Not applicable
Flammability (solid, gas)	Not applicable
Upper flammability limit:	Not applicable
Lower flammability limit:	Not applicable
Autoignition Temperature (°F)	No information available
Autoignition Temperature (°C)	No information available
Decomposition Temperature (°F)	No information available
Decomposition Temperature (°C)	No information available
Partition coefficient	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not Applicable
Chemical Stability	Stable under normal conditions.
Conditions to avoid	Prevent from freezing.
Incompatible Materials	No materials to be especially mentioned.
Hazardous Decomposition Products	None under normal use.
Possibility of hazardous reactions	None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Principal Routes of Exposure Eye contact, skin contact and inhalation.

Acute Toxicity

Product Information No information available

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available

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

Eye contact	May cause slight irritation.
Skin contact	Substance may cause slight skin irritation. Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	May cause irritation of respiratory tract.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Sensitization	No information available
Neurological Effects	No information available.
Mutagenic Effects	No information available.
Reproductive Effects	No information available.
Developmental Effects	No information available.
Target organ effects	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Other adverse effects	No information available.
Aspiration Hazard	No information available

Numerical measures of toxicity

Component Information

Carcinogenicity

There are no known carcinogenic chemicals in this product above reportable levels.

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

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

Product Information

Acute Toxicity to Fish

No information available

Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants

No information available

Persistence / Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Environmental Media

No information available.

Ozone

No information available

Component Information**Acute Toxicity to Fish**

No information available

Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants

No information available

13. DISPOSAL CONSIDERATIONS**Waste Disposal Method**

Dispose of in accordance with federal, state, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

14. TRANSPORT INFORMATION**DOT**

Not regulated

ICAO / IATA

Not regulated

IMDG / IMO

Not regulated

15. REGULATORY INFORMATION**International Inventories****TSCA: United States**

Yes - All components are listed or exempt.

DSL: Canada

Yes - All components are listed or exempt.

Federal Regulations

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

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

None

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

None

US State Regulations

California Proposition 65

 **WARNING:** Cancer and Reproductive Harm– www.P65warnings.ca.gov

State Right-to-Know

Chemical name	Massachusetts	New Jersey	Pennsylvania
Limestone	X	X	X
Diatomaceous earth		X	

Legend

X - Listed

16. OTHER INFORMATION

HMIS - **Health: 1** **Flammability: 0** **Reactivity: 0** **PPE: -**

HMIS Legend

- 0 - Minimal Hazard
- 1 - Slight Hazard
- 2 - Moderate Hazard
- 3 - Serious Hazard
- 4 - Severe Hazard
- * - Chronic Hazard

X - Consult your supervisor or S.O.P. for "Special" handling instructions.

Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

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 MSDSs under 29 CFR 1910.1200, the preparer, has chosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Prepared By Product Stewardship Department
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
800-225-5554

Revision Date: 04-Jan-2019
Revision Summary Not available

Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information 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 determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

END OF SAFETY DATA SHEET



Benjamin Moore®

SAFETY DATA SHEET

Revision Date: 04-Nov-2021

Revision Number: 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name ULTRA SPEC 500 INTERIOR PAINT - SATIN/PEARL BASE 1
Product Code T5451X
Alternate Product Code T5451X
Product Class Water thinned paint
Color All
Recommended use Paint
Restrictions on use No information available

Manufacturer
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
Phone: 1-866-708-9180
www.benjaminmoore.com

Emergency Telephone
CHEMTREC: +1 703-741-5970 / 1-800-424-9300
+1 703-527-3887 (outside US & Canada)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Appearance liquid

Odor little or no odor

Hazards not otherwise classified (HNOC)

Not applicable

Other information

No information available

WARNING: This product contains isothiazolinone compounds at levels of <0.1%. These substances are biocides commonly found in most paints and a variety of personal care products as a preservative. Certain individuals may be sensitive or allergic to these substances, even at low levels.

3. COMPOSITION INFORMATION ON COMPONENTS

Chemical name	CAS No.	Weight-%
Titanium dioxide	13463-67-7	15 - 20
Nepheline syenite	37244-96-5	5 - 10

4. FIRST AID MEASURES

General Advice	No hazards which require special first aid measures.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.
Most Important Symptoms/Effects	None known.
Notes To Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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.
Specific Hazards Arising From The Chemical	Closed containers may rupture if exposed to fire or extreme heat.
Sensitivity to mechanical impact	No
Sensitivity to static discharge	No
Flash Point Data	
Flash point (°F)	Not applicable
Flash Point (°C)	Not applicable
Method	Not applicable

Flammability Limits In Air

Lower flammability limit: Not applicable
Upper flammability limit: Not applicable

NFPA **Health:** 1 **Flammability:** 0 **Instability:** 0 **Special:** Not Applicable

NFPA Legend
 0 - Not Hazardous
 1 - Slightly
 2 - Moderate
 3 - High
 4 - Severe

The ratings assigned are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used. Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Other Information Prevent further leakage or spillage if safe to do so.

Environmental precautions See Section 12 for additional Ecological Information.

Methods for Cleaning Up Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage Keep container tightly closed. Keep out of the reach of children.

Incompatible Materials No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL
Titanium dioxide	TWA: 10 mg/m ³	15 mg/m ³ - TWA

Legend
 ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
 OSHA - Occupational Safety & Health Administration Exposure Limits
 N/E - Not Established

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection	Safety glasses with side-shields.
Skin Protection	Protective gloves and impervious clothing.
Respiratory Protection	In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Odor	little or no odor
Odor Threshold	No information available
Density (lbs/gal)	10.2 - 10.7
Specific Gravity	1.25 - 1.27
pH	No information available
Viscosity (cps)	No information available
Solubility(ies)	No information available
Water solubility	No information available
Evaporation Rate	No information available
Vapor pressure	No information available
Vapor density	No information available
Wt. % Solids	45 - 55
Vol. % Solids	30 - 40
Wt. % Volatiles	45 - 55
Vol. % Volatiles	60 - 70
VOC Regulatory Limit (g/L)	0
Boiling Point (°F)	212
Boiling Point (°C)	100
Freezing point (°F)	32
Freezing Point (°C)	0
Flash point (°F)	Not applicable
Flash Point (°C)	Not applicable
Method	Not applicable
Flammability (solid, gas)	Not applicable
Upper flammability limit:	Not applicable
Lower flammability limit:	Not applicable
Autoignition Temperature (°F)	No information available
Autoignition Temperature (°C)	No information available
Decomposition Temperature (°F)	No information available
Decomposition Temperature (°C)	No information available
Partition coefficient	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not Applicable
Chemical Stability	Stable under normal conditions.
Conditions to avoid	Prevent from freezing.

Incompatible Materials No materials to be especially mentioned.
Hazardous Decomposition Products None under normal use.
Possibility of hazardous reactions None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Principal Routes of Exposure Eye contact, skin contact and inhalation.

Acute Toxicity

Product Information No information available

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available

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

Eye contact May cause slight irritation.
Skin contact Substance may cause slight skin irritation. Prolonged or repeated contact may dry skin and cause irritation.
Inhalation May cause irritation of respiratory tract.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Sensitization No information available
Neurological Effects No information available.
Mutagenic Effects No information available.
Reproductive Effects No information available.
Developmental Effects No information available.
Target organ effects No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Other adverse effects No information available.
Aspiration Hazard No information available

Numerical measures of toxicity

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

ATEmix (oral) 60657 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-

Chronic Toxicity

Carcinogenicity

The information below indicates whether each agency has listed any ingredient as a carcinogen.:

Chemical name	IARC	NTP	OSHA
Titanium dioxide	2B - Possible Human Carcinogen		Listed

• Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."

Legend

IARC - International Agency for Research on Cancer

NTP - National Toxicity Program

OSHA - Occupational Safety & Health Administration

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

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

Product Information

Acute Toxicity to Fish

No information available

Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants

No information available

Persistence / Degradability

No information available.

Bioaccumulation

There is no data for this product.

Mobility in Environmental Media

No information available.

Ozone

No information available

Component Information

Acute Toxicity to Fish

Titanium dioxide

LC50: > 1000 mg/L (Fathead Minnow - 96 hr.)

Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants

No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose of in accordance with federal, state, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO / IATA Not regulated

IMDG / IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA: United States

Yes - All components are listed or exempt.

DSL: Canada

Yes - All components are listed or exempt.

Federal Regulations

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

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

None

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

None

US State Regulations

California Proposition 65

 **WARNING:** Cancer and Reproductive Harm— www.P65warnings.ca.gov

State Right-to-Know

Chemical name	Massachusetts	New Jersey	Pennsylvania
Titanium dioxide	X	X	X

Legend

X - Listed

16. OTHER INFORMATION

HMIS - **Health:** 1 **Flammability:** 0 **Reactivity:** 0 **PPE:** -

HMIS Legend

- 0 - Minimal Hazard
- 1 - Slight Hazard
- 2 - Moderate Hazard
- 3 - Serious Hazard
- 4 - Severe Hazard
- * - Chronic Hazard

X - Consult your supervisor or S.O.P. for "Special" handling instructions.

Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

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 MSDSs under 29 CFR 1910.1200, the preparer, has chosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Prepared By Product Stewardship Department
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
800-225-5554

Revision Date: 04-Nov-2021
Revision Summary Not available

Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown

above. This information 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 determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

End of Safety Data Sheet



SAFETY DATA SHEET

Revision Date: 19-Nov-2018

Revision Number: 4

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name ULTRA SPEC 500 INTERIOR SEMI-GLOSS BASE 4
Product Code N5394X
Alternate Product Code N5394X
Product Class WATER THINNED PAINT
Color All
Recommended use Paint
Restrictions on use No information available

Manufacturer
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
Phone: 1-866-708-9180
www.benjaminmoore.com

Emergency Telephone
CHEMTREC (US): 800-424-9300
CHEMTREC (outside US): (703)-527-3887

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Appearance liquid

Odor little or no odor

Hazards not otherwise classified (HNOC)

Not applicable

Other information

No information available

Other hazards

May cause allergic skin reaction

3. COMPOSITION INFORMATION ON COMPONENTS

Chemical name	CAS No.	Weight-%
Kaolin	1332-58-7	10
Nepheline syenite	37244-96-5	5
Titanium dioxide	13463-67-7	0.5
Ammonia	7664-41-7	0.5
Hexanedioic acid, dihydrazide	1071-93-8	0.5

4. FIRST AID MEASURES

General Advice	No hazards which require special first aid measures.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.
Most Important Symptoms/Effects	May cause allergic skin reaction.
Notes To Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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.
Specific Hazards Arising From The Chemical	Closed containers may rupture if exposed to fire or extreme heat.
Sensitivity To Mechanical Impact	No
Sensitivity To Static Discharge	No
Flash Point Data	
Flash Point (°F)	Not applicable
Flash Point (°C)	Not applicable
Method	Not applicable

Flammability Limits In Air

Lower flammability limit: Not applicable
Upper flammability limit: Not applicable

NFPA **Health:** 1 **Flammability:** 0 **Instability:** 0 **Special:** Not Applicable

NFPA Legend
 0 - Not Hazardous
 1 - Slightly
 2 - Moderate
 3 - High
 4 - Severe

The ratings assigned are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.

Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Other Information Prevent further leakage or spillage if safe to do so.

Environmental precautions See Section 12 for additional Ecological Information.

Methods for Cleaning Up Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage Keep container tightly closed. Keep out of the reach of children.

Incompatible Materials No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL
Kaolin	2 mg/m ³ - TWA	15 mg/m ³ - TWA 5 mg/m ³ - TWA
Titanium dioxide	10 mg/m ³ - TWA	15 mg/m ³ - TWA
Ammonia	25 ppm - TWA 35 ppm - STEL	50 ppm - TWA 35 mg/m ³ - TWA

Legend

ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
 OSHA - Occupational Safety & Health Administration Exposure Limits
 N/E - Not Established

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.
Skin Protection Protective gloves and impervious clothing.
Respiratory Protection In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Odor	little or no odor
Odor Threshold	No information available
Density (lbs/gal)	9.3 - 9.4
Specific Gravity	1.11 - 1.13
pH	No information available
Viscosity (cps)	No information available
Solubility(ies)	No information available
Water solubility	No information available
Evaporation Rate	No information available
Vapor pressure @20 °C (kPa)	No information available
Vapor density	No information available
Wt. % Solids	40 - 50
Vol. % Solids	30 - 40
Wt. % Volatiles	50 - 60
Vol. % Volatiles	60 - 70
VOC Regulatory Limit (g/L)	0
Boiling Point (°F)	212
Boiling Point (°C)	100
Freezing Point (°F)	32
Freezing Point (°C)	0
Flash Point (°F)	Not applicable
Flash Point (°C)	Not applicable
Method	Not applicable
Flammability (solid, gas)	Not applicable
Upper flammability limit:	Not applicable
Lower flammability limit:	Not applicable
Autoignition Temperature (°F)	No information available
Autoignition Temperature (°C)	No information available
Decomposition Temperature (°F)	No information available
Decomposition Temperature (°C)	No information available
Partition coefficient	No information available

10. STABILITY AND REACTIVITY

Reactivity Not Applicable

Chemical Stability Stable under normal conditions.

Conditions to avoid	Prevent from freezing.
Incompatible Materials	No materials to be especially mentioned.
Hazardous Decomposition Products	None under normal use.
Possibility of hazardous reactions	None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Principal Routes of Exposure Eye contact, skin contact and inhalation.

Acute Toxicity

Product Information No information available

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available

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

Eye contact	May cause slight irritation.
Skin contact	Substance may cause slight skin irritation. Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	May cause irritation of respiratory tract.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Sensitization	May cause an allergic skin reaction
Neurological Effects	No information available.
Mutagenic Effects	No information available.
Reproductive Effects	No information available.
Developmental Effects	No information available.
Target organ effects	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Other adverse effects	No information available.
Aspiration Hazard	No information available

Numerical measures of toxicity

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

ATEmix (inhalation-dust/mist) 445.7 mg/L

Component Information

Kaolin

LD50 Oral: > 5000 mg/kg (Rat)

Titanium dioxide

LD50 Oral: > 10000 mg/kg (Rat)

Ammonia

LC50 Inhalation (Vapor): 2000 ppm (Rat, 4 hr.)

Carcinogenicity

The information below indicates whether each agency has listed any ingredient as a carcinogen:.

Chemical name	IARC	NTP	OSHA
Titanium dioxide	2B - Possible Human Carcinogen		Listed

• Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."

Legend

IARC - International Agency for Research on Cancer

NTP - National Toxicity Program

OSHA - Occupational Safety & Health Administration

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

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

Product Information

Acute Toxicity to Fish

No information available

Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants

No information available

Persistence / Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Environmental Media

No information available.

Ozone

No information available

Component Information

Acute Toxicity to Fish

Titanium dioxide

LC50: > 1000 mg/L (Fathead Minnow - 96 hr.)

Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants

No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose of in accordance with federal, state, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

14. TRANSPORT INFORMATION

DOT

Not regulated

ICAO / IATA

Not regulated

IMDG / IMO

Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA: United States

Yes - All components are listed or exempt.

DSL: Canada

Yes - All components are listed or exempt.

Federal Regulations

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

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

None

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

None

US State Regulations

California Proposition 65



WARNING: Cancer and Reproductive Harm– www.P65warnings.ca.gov

State Right-to-Know

Chemical name	Massachusetts	New Jersey	Pennsylvania
Kaolin	X	X	X

Legend

X - Listed

16. OTHER INFORMATION

HMIS - Health: 1 Flammability: 0 Reactivity: 0 PPE: -

HMIS Legend

- 0 - Minimal Hazard
- 1 - Slight Hazard
- 2 - Moderate Hazard
- 3 - Serious Hazard
- 4 - Severe Hazard
- * - Chronic Hazard

X - Consult your supervisor or S.O.P. for "Special" handling instructions.

Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

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 MSDSs under 29 CFR 1910.1200, the preparer, has chosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

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Prepared By Product Stewardship Department
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
800-225-5554

Revision Date: 19-Nov-2018
Revision Summary Not available

Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information 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 determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

END OF SAFETY DATA SHEET



SAFETY DATA SHEET

Revision Date: 25-Sep-2018

Revision Number: 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name ULTRA SPEC 500 INTERIOR SEMI-GLOSS WHITE
Product Code N53901
Alternate Product Code N53901
Product Class WATER THINNED PAINT
Color White
Recommended use Paint
Restrictions on use No information available

Manufacturer
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
Phone: 1-866-708-9180
www.benjaminmoore.com

Emergency Telephone
CHEMTREC (US): 800-424-9300
CHEMTREC (outside US): (703)-527-3887

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Appearance liquid

Odor little or no odor

Hazards not otherwise classified (HNOC)

Not applicable

Other information

No information available

3. COMPOSITION INFORMATION ON COMPONENTS

Chemical name	CAS No.	Weight-%
Titanium dioxide	13463-67-7	20
Nepheline syenite	37244-96-5	10
Sodium C14-C16 olefin sulfonate	68439-57-6	0.5

4. FIRST AID MEASURES

General Advice	No hazards which require special first aid measures.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.
Most Important Symptoms/Effects	None known.
Notes To Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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.
Specific Hazards Arising From The Chemical	Closed containers may rupture if exposed to fire or extreme heat.
Sensitivity To Mechanical Impact	No
Sensitivity To Static Discharge	No
Flash Point Data	
Flash Point (°F)	Not applicable
Flash Point (°C)	Not applicable
Method	Not applicable
Flammability Limits In Air	
Lower flammability limit:	Not applicable

Upper flammability limit: Not applicable

NFPA **Health:** 1 **Flammability:** 0 **Instability:** 0 **Special:** Not Applicable

NFPA Legend

- 0 - Not Hazardous
- 1 - Slightly
- 2 - Moderate
- 3 - High
- 4 - Severe

The ratings assigned are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.

Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Other Information Prevent further leakage or spillage if safe to do so.

Environmental precautions See Section 12 for additional Ecological Information.

Methods for Cleaning Up Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage Keep container tightly closed. Keep out of the reach of children.

Incompatible Materials No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL
Titanium dioxide	10 mg/m ³ - TWA	15 mg/m ³ - TWA

Legend

ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
 OSHA - Occupational Safety & Health Administration Exposure Limits
 N/E - Not Established

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.
Skin Protection Protective gloves and impervious clothing.

Respiratory Protection In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Odor	little or no odor
Odor Threshold	No information available
Density (lbs/gal)	10.6 - 10.7
Specific Gravity	1.27 - 1.29
pH	No information available
Viscosity (cps)	No information available
Solubility(ies)	No information available
Water solubility	No information available
Evaporation Rate	No information available
Vapor pressure @20 °C (kPa)	No information available
Vapor density	No information available
Wt. % Solids	50 - 60
Vol. % Solids	35 - 45
Wt. % Volatiles	40 - 50
Vol. % Volatiles	55 - 65
VOC Regulatory Limit (g/L)	0
Boiling Point (°F)	212
Boiling Point (°C)	100
Freezing Point (°F)	32
Freezing Point (°C)	0
Flash Point (°F)	Not applicable
Flash Point (°C)	Not applicable
Method	Not applicable
Flammability (solid, gas)	Not applicable
Upper flammability limit:	Not applicable
Lower flammability limit:	Not applicable
Autoignition Temperature (°F)	No information available
Autoignition Temperature (°C)	No information available
Decomposition Temperature (°F)	No information available
Decomposition Temperature (°C)	No information available
Partition coefficient	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not Applicable
Chemical Stability	Stable under normal conditions.
Conditions to avoid	Prevent from freezing.
Incompatible Materials	No materials to be especially mentioned.
Hazardous Decomposition Products	None under normal use.

Possibility of hazardous reactions

None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Principal Routes of Exposure Eye contact, skin contact and inhalation.

Acute Toxicity

Product Information No information available

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available

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

Eye contact	May cause slight irritation.
Skin contact	Substance may cause slight skin irritation. Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	May cause irritation of respiratory tract.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Sensitization	No information available
Neurological Effects	No information available.
Mutagenic Effects	No information available.
Reproductive Effects	No information available.
Developmental Effects	No information available.
Target organ effects	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Other adverse effects	No information available.
Aspiration Hazard	No information available

Numerical measures of toxicity

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

ATEmix (oral) 53165 mg/kg

Component Information

Titanium dioxide
LD50 Oral: > 10000 mg/kg (Rat)

Carcinogenicity

The information below indicates whether each agency has listed any ingredient as a carcinogen.:

Chemical name	IARC	NTP	OSHA
Titanium dioxide	2B - Possible Human Carcinogen		Listed

• Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."

Legend

IARC - International Agency for Research on Cancer

NTP - National Toxicity Program

OSHA - Occupational Safety & Health Administration

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

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

Product Information

Acute Toxicity to Fish

No information available

Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants

No information available

Persistence / Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Environmental Media

No information available.

Ozone

No information available

Component Information

Acute Toxicity to Fish

Titanium dioxide

LC50: > 1000 mg/L (Fathead Minnow - 96 hr.)

Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants

No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with federal, state, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO / IATA Not regulated

IMDG / IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA: United States Yes - All components are listed or exempt.
DSL: Canada No - Not all of the components are listed.
One or more component is listed on NDSL.

Federal Regulations

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

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

None

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

None

US State Regulations

California Proposition 65

 **WARNING:** Cancer and Reproductive Harm— www.P65warnings.ca.gov

State Right-to-Know

Chemical name	Massachusetts	New Jersey	Pennsylvania
Titanium dioxide	X	X	X

Legend
 X - Listed

16. OTHER INFORMATION

HMIS - Health: 1 Flammability: 0 Reactivity: 0 PPE: -

HMIS Legend

- 0 - Minimal Hazard
- 1 - Slight Hazard
- 2 - Moderate Hazard
- 3 - Serious Hazard
- 4 - Severe Hazard
- * - Chronic Hazard

X - Consult your supervisor or S.O.P. for "Special" handling instructions.

Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

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 MSDSs under 29 CFR 1910.1200, the preparer, has chosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Prepared By Product Stewardship Department
 Benjamin Moore & Co.
 101 Paragon Drive
 Montvale, NJ 07645
 800-225-5554

Revision Date: 25-Sep-2018
Revision Summary Not available

Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information 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 determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

END OF SAFETY DATA SHEET

N

Lab-aids

MATERIAL SAFETY DATA SHEET

ID # 81R-11

01/12/01

CHEMICAL NAME & SYNONYMS -	Universal Indicator
CAS No.(s) -	7732-18-5; 0064-17-5; 1310-73-2; 0076-59-5
USED IN LAB-AIDS KITS # (S) -	81R
FORMULA -	Mixture/solution
FORMULA WEIGHT (F.W.) -	Mixture
PHYSICAL DATA - (DENSITY, SOLUBILITY, ETC.)	An ethyl alcohol based solution.
APPEARANCE AND ODOR -	Dark green liquid, with characteristic odor of ethyl alcohol.
INCOMPATIBILITY - (MATERIALS TO AVOID)	Open flame.
DOT CLASS -	Not regulated
REACTIVITY -	Stable
CONDITIONS TO AVOID- (IF ANY)	Avoid inhaling fumes.
HEALTH HAZARDS - (IF ANY)	Toxic by ingestion.
TOLERANCE LIMIT VALUE (TLV)- (IF ESTABLISHED)	None established.
FIRE HAZARDS - (IF ANY)	Flammable, use Triclass dry chemical fire extinguisher
SPIILLS AND LEAKS -	Absorb w/sand or vermiculite and place in a suitable container
DISPOSAL METHOD -	Allow to evaporate and place residue in the trash
SPECIAL PRECAUTIONS - (IF ANY)	Use chemical splash safety goggles
FIRST AID - (IF SUBSTANCE DANGEROUS)	External: Wash affected parts with plenty of water Internal: If ingested wash mouth and consult a physician Respiratory: Transport to fresh air

N/A - NOT APPLICABLE

17 COLT COURT, RONKONKOMA, NY 11779

(631) 737-1133

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

Effective date : 01.06.2015

Universal Indicator

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

Product name: Universal Indicator

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: KEMUN1000-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:



Flammable
Flammable solids, category 2

Flammable liq. 2.

Signal word: None

Hazard statements:

Highly flammable liquid and vapour.

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.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/light/.../equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wear protective gloves/protective clothing/eye protection/face protection.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- In case of fire: Use ... for extinction.
- Store in a well ventilated place. Keep cool.
- Dispose of contents/container.

Other Non-GHS Classification: None

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

Effective date : 01.06.2015

Universal Indicator

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 64-17-5	Ethanol	47.34 %
CAS 34722-90-2	Bromothymol Blue, Sodium Salt	0.05 %
CAS 7732-18-5	Deionized Water	52.45 %
CAS 547-58-0	Methyl Orange	0.02 %
CAS 845-10-3	Methyl Red, Sodium Salt	0.015 %
CAS 518-51-4	Phenolphthalein, Disodium Salt	0.035 %
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. If breathing is difficult give oxygen. Immediately get medical assistance.

After skin contact:

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical attention if irritation persists or if concerned.

After eye contact:

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

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Dilute mouth with water or milk after rinsing. Immediately get medical assistance.

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. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media**Suitable extinguishing agents:**

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Water spray can keep containers cool.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Moderate explosion hazard. Dangerous fire hazard when exposed to heat, sparks, and open flames.

Advice for firefighters:**Protective equipment:**

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Effective date : 01.06.2015

Universal Indicator

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

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. Ensure adequate ventilation.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Ethanol has a slight acute and chronic toxicity to aquatic life.

Methods and material for containment and cleaning up:

If necessary use trained response staff or contractor. Refer to Section 8. Wear protective eyewear, gloves, and clothing. Remove all sources of ignition. Contain spill. Absorb with suitable material and place in chemical waste container. Ventilate area of spill. Use non-sparking equipment. Dispose of empty containers as unused product. Refer to Section 13.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Wear protective eyewear, gloves, and clothing. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes, and clothing. Empty containers can still be hazardous since they retain product residue. Refer to Section 8.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Store in a secure flammable storage area away from sources of ignition. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Keep container tightly closed. Store with like hazards. Protect from freezing and physical damage.

SECTION 8: Exposure controls/personal protection



Control parameters:

64-17-5, Ethanol, Denatured , ACGIH TLV: 1880mg/m3.
64-17-5, Ethanol, Denatured , OSHA PEL: 1900mg/m3.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area.

Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. If exposure limit is exceeded, a full-face respirator with organic cartridge may be worn.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation.

Eye protection:

Safety glasses with side shields or goggles.

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Universal Indicator

General hygienic measures: Wash hands before breaks and at the end of work. Perform routine housekeeping to prevent dust generation. Before wearing wash contaminated clothing. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear green liquid	Explosion limit lower:	3.3
		Explosion limit upper:	18.0
Odor:	Alcohol	Vapor pressure at 20°C:	48 mm Hg
Odor threshold:	Not determined	Vapor density:	1.5
pH-value:	Not determined	Relative density:	0.93
Melting/Freezing point:	Not determined	Solubilities:	Infinite solubility.
Boiling point/Boiling range:	80C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	15.5°C	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	3.6	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity: None**Chemical stability:**

Stable under normal conditions.

Possible hazardous reactions:

Vapours may form explosive mixture with air.

Conditions to avoid:

Excessive heat. Incompatible materials. Ignition sources.

Incompatible materials:

Strong oxidizers, heat, sparks, open flames, platinum, sodium, bromine pentafluoride, potassium dioxide, acetyl bromide, and acetyl chloride.

Hazardous decomposition products:Carbon oxides (CO, CO₂). Acrid and irritating fumes.

SECTION 11: Toxicological information

Acute Toxicity:**Dermal:**

: LD-50 15800 mg/kg (rabbit).

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.

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Effective date : 01.06.2015

Universal Indicator

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:

: Aquatic Tox., Ethanol has a slight acute and chronic toxicity to aquatic life.

Persistence and degradability: No additional information.
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:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Absorb with suitable absorbent material such as sand or earth and containerize for disposal. Ventilate area of leak or spill. Have fire extinguishing agent available in case of fire. Eliminate all sources of ignition. Use spark-proof tools and explosion-proof equipment. 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

UN1170

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Ethanol.

Hazard Class: None

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Ethanol.

Hazard Class: None

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):

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

Effective date : 01.06.2015

Universal Indicator

Acute, Chronic, Fire

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.

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:

64-17-5 Ethanol.

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).

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according to 29CFR1910/1200 and GHS Rev. 3

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Universal Indicator

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 #: 839.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Universal Indicator 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: Flammable liquids (Category 3). Flammable liquid and vapor (H226). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral and dermal (Category 5). May be harmful if swallowed or in contact with skin (H303+H313).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Methyl red	845-10-3	C ₁₅ H ₁₄ N ₃ O ₂ Na	291.28	<0.05%
Bromthymol blue, sodium salt	34722-90-2	C ₂₇ H ₂₇ Br ₂ O ₃ S	646.38	<0.05%
Phenolphthalein	77-09-8	NaC ₂₀ H ₁₄ O ₄	318.31	<0.05%
Sodium hydroxide	1310-73-2	NaOH	39.997	<0.05%
Ethyl alcohol, denatured	64-17-5	C ₂ H ₅ OH	46.07	55%
Water	7732-18-5	H ₂ O	18.00	45%

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. **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 (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). **If swallowed:** Rinse mouth. Give large quantities of water for dilution. Call a physician or poison control at once, product contains denatured ethyl alcohol.

SECTION 5 — FIRE FIGHTING MEASURES

Class IC flammable liquid.

Flash point: 24 °C

When heated, releases flammable fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE

H-2

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 #9. Store with dyes, indicators and stains. Keep container tightly closed and cool (P233+P235). Use explosion-proof electrical and ventilating equipment (P241). Take precautionary measures against static discharge (P243).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Will stain skin, clothing, and surfaces.
Exposure guidelines: (as ethyl alcohol) PEL 1000 ppm (OSHA), Ceiling 1000 ppm (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

The color of this solution depends entirely on the pH of the solution. Slight alcohol odor. pH indicator solution.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with open flame, sparks or other sources of ignition.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye irritation, nausea, dizziness, headache. ORL-MAN TLD₀: 29 mg/kg (as phenolphthalein)
Chronic effects: Liver damage, reproductive, teratogenic effects, IHL-RAT LC₅₀: 20,000 ppm/10H (as ethyl alcohol)
carcinogen. SKN-RBT LD₅₀: N.A.
Target organs: Eyes, skin, central nervous system, liver, reproductive system.

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: Ethyl alcohol solution. Hazard class: 3, Flammable liquid. UN number: UN1170.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

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

Revision Date: March 21, 2014



GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA 	HMIS <table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">0</td> </tr> </table>	Health Hazard	1	Fire Hazard	3	Reactivity	0	Personal Protective Equipment See Section 15.
Health Hazard	1							
Fire Hazard	3							
Reactivity	0							

Section 1. Chemical Product and Company Identification		<i>Page Number: 1</i>
Common Name/ Trade Name	Universal Indicator Solution	Catalog Number(s) U-110
Manufacturer	SPECTRUM CHEMICAL MFG. CORP. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS# Mixture.
Commercial Name(s)	Not available.	RTECS Not applicable.
Synonym	Not available.	TSCA TSCA 8(b) inventory: Isopropyl alcohol; Methyl alcohol; Phenolphthalein; Bromothymol blue sodium salt; Thymol blue, sodium salt; Methyl red, sodium salt; Water
Chemical Name	Not applicable.	CI# Not applicable.
Chemical Family	Alcohol. (Solvent.)	IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 CALL (310) 516-8000
Chemical Formula	Not applicable.	
Supplier	SPECTRUM CHEMICAL MFG. CORP. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	

Section 2. Composition and Information on Ingredients					
		<i>Exposure Limits</i>			
Name	CAS #	TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	% by Weight
1) Isopropyl alcohol	67-63-0	980	1230		37
2) Methyl alcohol	67-56-1	262	328		0.8
3) Phenolphthalein	77-09-8				0.03
4) Bromothymol blue sodium salt	34722-90-2				0.03
5) Thymol blue, sodium salt	81012-93-3				0.03
6) Methyl red, sodium salt	845-10-3				0.02
7) Water	7732-18-5				62.1
Toxicological Data on Ingredients	Isopropyl alcohol: ORAL (LD50): Acute: 5045 mg/kg [Rat]. 3600 mg/kg [Mouse]. DERMAL (LD50): Acute: 12800 mg/kg [Rabbit]. VAPOR (LC50): Acute: 22627.4 ppm 4 hour(s) [Rat]. Methyl alcohol: ORAL (LD50): Acute: 5628 mg/kg [Rat]. DERMAL (LD50): Acute: 15800 mg/kg [Rabbit]. VAPOR (LC50): Acute: 64000 ppm 4 hour(s) [Rat].				

Continued on Next Page

Section 3. Hazards Identification

Potential Acute Health Effects	Very hazardous in case of eye contact (irritant), of ingestion. Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator). Non-corrosive for skin. Non-sensitizer for skin. Inflammation of the eye is characterized by redness, watering, and itching.
Potential Chronic Health Effects	Non-corrosive for skin. Non-sensitizer for skin. Non-permeator by skin. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: PROVEN [Methyl alcohol] The substance is toxic to kidneys, lungs, the nervous system, mucous membranes, the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.
Skin Contact	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	Allow the victim to rest in a well ventilated area. Seek immediate medical attention.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
Ingestion	Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Flammable.
Auto-Ignition Temperature	The lowest known value is 399°C (750.2°F) (Isopropyl alcohol).
Flash Points	The lowest known value is CLOSED CUP: 11.67°C (53°F). (TAG). OPEN CUP: 18.3°C (64.9°F). (Cleveland). (Isopropyl alcohol)
Flammable Limits	The greatest known range is LOWER: 2% UPPER: 12% (Isopropyl alcohol)
Products of Combustion	These products are carbon oxides (CO, CO2).
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames and sparks, of oxidizing materials. Slightly flammable to flammable in presence of heat, of combustible materials.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive to explosive in presence of oxidizing materials.
Fire Fighting Media and Instructions	Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.
Special Remarks on Fire Hazards	Explosive in the form of vapor when exposed to heat or flame. May form explosive mixtures with air. Vapor may travel considerable distance to source of ignition and flash back. CAUTION: MAY BURN WITH NEAR INVISIBLE FLAME (Isopropyl alcohol)
Special Remarks on Explosion Hazards	Not available.

Continued on Next Page

Section 6. Accidental Release Measures

Small Spill	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill	Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes
Storage	Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Personal Protection	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	<p>Isopropyl alcohol TWA: 400 STEL: 500 (ppm) from ACGIH (TLV) [1995] TWA: 980 STEL: 1230 (mg/m³) from ACGIH [1995]</p> <p>Methyl alcohol TWA: 200 STEL: 250 (ppm) from ACGIH (TLV) [1995] TWA: 262 STEL: 328 (mg/m³) from ACGIH [1995]</p> <p>Consult local authorities for acceptable exposure limits.</p>

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Not available.
Molecular Weight	Not applicable.	Taste	Not available.
pH (1% soln/water)	Neutral.	Color	Not available.
Boiling Point	The lowest known value is 82.22°C (180°F) (Isopropyl alcohol). Weighted average: 93.36°C (200°F)		
Melting Point	May start to solidify at -89.5°C (-129.1°F) based on data for: Isopropyl alcohol.		
Critical Temperature	Not available.		
Specific Gravity	Weighted average: 0.91 (Water = 1)		
Vapor Pressure	The highest known value is 33 mm of Hg (@ 20°C) (Isopropyl alcohol). Weighted average: 23.31 mm of Hg (@ 20°C)		
Vapor Density	The highest known value is 2.07 (Air = 1) (Isopropyl alcohol). Weighted average: 1.16 (Air = 1)		
Volatility	Not available.		

Continued on Next Page

Universal Indicator Solution		Page Number: 4
Odor Threshold	The highest known value is 50 ppm (Isopropyl alcohol)	
Water/Oil Dist. Coeff.	The product is equally soluble in oil and water.	
Ionicity (in Water)	Not available.	
Dispersion Properties	Is not dispersed in methanol, diethyl ether. See solubility in water, methanol, diethyl ether, n-octanol, acetone.	
Solubility	Easily soluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.	

Section 10. Stability and Reactivity Data	
Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Not available.
Incompatibility with various substances	Slightly reactive to reactive with oxidizing agents.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	No.

Section 11. Toxicological Information	
Routes of Entry	Eye contact. Inhalation. Ingestion.
Toxicity to Animals	WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 9730 mg/kg (Mouse) (Calculated value for the mixture). Acute dermal toxicity (LD50): 34595 mg/kg (Rabbit) (Calculated value for the mixture). Acute toxicity of the vapor (LC50): 61155 ppm 4 hour(s) (Rat) (Calculated value for the mixture).
Chronic Effects on Humans	DEVELOPMENTAL TOXICITY: PROVEN [Methyl alcohol] The substance is toxic to kidneys, lungs, the nervous system, mucous membranes, the reproductive system.
Other Toxic Effects on Humans	Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator). Non-corrosive for skin. Non-sensitizer for skin.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Detected in maternal milk in human. (Isopropyl alcohol)
Special Remarks on other Toxic Effects on Humans	Narcotic. (Methyl alcohol)

Section 12. Ecological Information	
Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are more toxic.


Continued on Next Page

Special Remarks on the Products of Biodegradation	Not available.
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Section 13. Disposal Considerations

Waste Disposal	
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Section 14. Transport Information

DOT Classification	Class 3: Flammable liquid.
Identification	: Isopropanol solution (Isopropyl alcohol) : UN1219 PG: II
Special Provisions for Transport	Not available.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations	Pennsylvania RTK: Isopropyl alcohol; Methyl alcohol Massachusetts RTK: Isopropyl alcohol; Methyl alcohol TSCA 8(b) inventory: Isopropyl alcohol; Methyl alcohol; Phenolphthalein; Bromothymol blue sodium salt; Thymol blue, sodium salt; Methyl red, sodium salt; Water SARA 313 toxic chemical notification and release reporting: Isopropyl alcohol; Methyl alcohol CERCLA: Hazardous substances.: Methyl alcohol;
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California Proposition 65 Warnings	
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Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
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Other Classifications	WHMIS (Canada) CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC). DSCL (EEC) R11- Highly flammable. R38- Irritating to skin. R41- Risk of serious damage to eyes.
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HMIS (U.S.A.)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">1</td></tr> <tr><td style="text-align: center;">3</td></tr> <tr><td style="text-align: center;">0</td></tr> <tr><td style="text-align: center;">h</td></tr> </table>	1	3	0	h	National Fire Protection Association (U.S.A.) Health	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">0</td></tr> </table> Flammability Reactivity Specific hazard	0
1								
3								
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0								

WHMIS (Canada) (Pictograms)	 
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DSCL (Europe) (Pictograms)	 
----------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------

TDG (Canada)
(Pictograms)



ADR (Europe)
(Pictograms)



Protective Equipment



Gloves.



Lab coat.



Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information

MSDS Code U110S

References Not available.

Other Special Considerations Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

Printed 9/14/2006.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.

Section 1 Chemical Product and Company Identification

Page E1 of E2



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

Boreal Science
399 Vansickle Road
St. Catharines, 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 UNIVERSAL PH INDICATOR

Synonyms Universal Indicator

Section 2 Hazards Identification

Signal word: DANGER

Pictograms: GHS02 / GHS07 / GHS08 / GHS06

Target organs: Eyes, Central nervous system, Liver, Kidneys.

**GHS Classification:**

Flammable liquid (Category 2)
Acute toxicity, inhalation (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2B)
STOT-SE (Category 2)
STOT-SE (Category 3)

GHS Label information: Hazard statement:

H225: Highly flammable liquid and vapour.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H336: May cause drowsiness or dizziness.
H371: May cause damage to organs.

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.
P260: Do not breathe 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.
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.
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.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
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
Ethyl alcohol	64-17-5	64.50 - 65.11%	200-578-6
Water	7732-18-5	23.96%	231-791-2
Isopropyl alcohol	67-63-0	6.83%	200-661-7
Methanol	67-56-1	3.03 - 3.26%	200-659-6
Methyl isobutyl ketone	108-10-1	0.68 - 0.76%	203-550-1
Bromothymol blue	76-59-5	0.06%	200-971-2
Phenolphthalein	77-09-8	0.06%	201-004-7
Methyl red	845-10-3	0.02%	212-682-9
Thymol blue	62625-21-2	0.005%	263-650-6

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. 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 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: 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. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

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.

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, 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)
	Ethanol	STEL: 1000 ppm / 1880 mg/m ³ (A3)	TWA: 1000 ppm / 1900 mg/m ³	TWA: 1000 ppm / 1900 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, green liquid.	Evaporation rate (Butyl acetate = 1): 4.1*	Partition coefficient: Data not available
Odor: Mild characteristic odor.	Flammability (solid/gas): Data not available.	Auto-ignition temperature: 400°C (752°F)*
Odor threshold: Data not available.	Explosion limits: Lower / Upper: 4.0%(V) / 20.0%(V)*	Decomposition temperature: Data not available.
pH: Data not available.	Vapor pressure (mm Hg): 44.6 @ 20°C (68°F)*	Viscosity: Data not available.
Melting / Freezing point: -114°C (-173°F)*	Vapor density (Air = 1): 1.59*	Molecular formula: Mixture
Boiling point: 75-80°C (173-174°F)*	Relative density (Specific gravity): 0.794 @ 60°F*	Molecular weight: Mixture
Flash point: Approximately 21°C (70°F)	Solubility(ies): Soluble in water.	*[Pure Ethanol]

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, inorganic acids and halogens.

Hazardous decomposition products: Oxides of carbon.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 7060 mg/kg ; Inhalation-rat LC50: 124.7 mg/l/4hours [Ethanol]

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

Carcinogenicity: 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 3: Not classifiable as to its carcinogenicity to humans. [Isopropanol]

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: ⚠️ **WARNING!** :This product can expose you to Phenolphthalein, Methanol and Methyl isobutyl ketone, which are known to the State of California to cause cancer and birth defects or other reproductive harm.

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 dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat.

Ingestion: Ingestion causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait and coma.

Skin: Contact with skin causes irritation defatting on prolonged contact.

Eyes: Contact with eyes may cause blindness.

Signs and symptoms of exposure: See Potential health effects above.

Additional information: RTECS #: KQ6300000 [Ethanol]

Section 12 Ecological Information

Toxicity to fish: Oncorhynchus mykiss (fish, fresh water), LC50 = 11,200 mg/l/24 hours [Ethanol]

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacia), EC50 = 10,800 mg/l/24 hours [Ethanol, 99.8% pure]

Toxicity to algae: Chlorella pyrenoidosa (Algae), EC50 = 9,310 mg/l/growth rate [Ethanol, absolute]

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: UN1170

Shipping name: Ethanol solution

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
Ethanol	Listed	Not listed	D001	Listed	Not listed	⚠️ WARNING -Cancer and Reproductive Harm - www.P65Warnings.ca.gov.
Methanol	Listed	5,000 lbs.	U154	Listed	Not listed	
Isopropanol	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.

Product Number: 452AA
 Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
 Revision Number: 0



VI·JON[®] Safety Data Sheet

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

Product identifier UP & UP ISOPROPYL ALCOHOL 70%

Product Name: Isopropyl Alcohol 70%

Item Number: 452AA

Other means of identification

Synonyms: None

Recommended use of the chemical and restrictions on use

Recommended Use: First Aid

Uses advised against: Use only as directed.

Details of the supplier of the safety data sheet

Supplier Name Vi-Jon Inc.

Supplier Address Vi-Jon Inc.
 8800 Page Avenue
 Saint Louis
 MO
 63114
 US

Supplier Phone Number Phone: 314-427-1000 (M-F 8am-4pm CST)

Fax: 314-427-1010

Supplier Email info@vjon.com

Emergency telephone number Chemtrec: 1-800-424-9300 (24-Hour)

Product Number: 452AA
Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
Revision Number: 0

2. HAZARDS IDENTIFICATION


Classification

This product contains a chemical or chemicals considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

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

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Danger
Hazard statements May cause drowsiness or dizziness Flammable liquid and vapor	
	
Appearance: Clear, Colorless, Water-thin liquid	Physical State: Water-thin liquid
	Odor: Alcohol

Precautionary Statements - Prevention

Avoid breathing 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

Specific treatment (see supplemental first aid instructions on this label)

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.

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.

Product Number: 452AA
Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
Revision Number: 0

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

Prolonged or repeated contact may dry skin and cause irritation

Interactions with Other Chemicals

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Isopropyl Alcohol 70%	67-63-0	50-100	*
Water	7732-18-5	10-50	*

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

4. FIRST AID MEASURES

First aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if applicable, and continue flushing. If symptoms persist, call a physician.

Skin Contact

In the case of skin irritation or allergic reactions see a physician.

Inhalation

Move to fresh air. If symptoms persist, call a physician.

Ingestion

Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.

Protection of First-aiders

Use personal protective equipment. Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. For personal protection see Section 8.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

Product Number: 452AA
Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
Revision Number: 0

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol-resistant foam.

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition. Risk of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations

Uniform Fire Code	Flammable Liquid: I-B Irritant: Liquid
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Hazardous Combustion Products

Carbon oxides.

Explosion Data

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

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. 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

Ensure adequate ventilation. Use personal protective equipment. Evacuate personnel to safe areas. Refer to Section 8 Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other Information

Refer to protective measures listed in Sections 7 and 8. Ventilate the area.

Environmental precautions

Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Stop spill from entering drains, sewers, streams, or waterways.

Methods for Cleaning Up

Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Keep away from heat, sparks and open flame. No smoking.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

Incompatible Products Strong oxidizing agents. Acids. Chlorinated compounds.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Isopropyl Alcohol 70% 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	IDLH: 2000 ppm 10% LEL TWA: 980 mg/m ³ TWA: 400 ppm STEL: 500 ppm STEL: 1225 mg/m ³

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 Tightly fitting safety goggles.

Skin and Body Protection Wear protective gloves/clothing. 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. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Wash hands before breaks and immediately after handling the product.

Product Number: 452AA
Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
Revision Number: 0

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Water-Thin Liquid		
Appearance	Clear, Colorless, Water -Thin Liquid	Odor	Alcohol
Color	Colorless	Odor Threshold	No information available
<u>Property</u>	<u>Values</u>	<u>Remarks/ Method</u>	
pH	No data available	None known	
Melting/freezing point	No data available	None known	
Boiling Point/Range	No data available	None known	
Flash Point	22C / 72F	None known	
Evaporation rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limits in Air			
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Specific Gravity	No data available	None known	
Water Solubility	Miscible with water	None known	
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water		None known	
Autoignition temperature	No data available	None known	
Decomposition temperature	No data available	None known	
Kinematic viscosity	No data available	None known	
Dynamic viscosity		None known	
Explosive Properties	No data available		
Oxidizing Properties	No data available		
<u>Other Information</u>			
Softening Point	No data available		
VOC Content (%)	No data available		
Particle Size	No data available		
Particle Size Distribution	No data available		

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

Strong oxidizing agents. Acids. Chlorinated compounds.

Hazardous Decomposition Products

Carbon oxides.

When used in accordance with the directions.

Product Number: 452AA
Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
Revision Number: 0

11. TOXICOLOGICAL INFORMATION

There is no data for this product. The information included in this section describes the potential hazards of the individual ingredients.

Information on likely routes of exposure

Product Information

Inhalation	May cause drowsiness and dizziness. May cause irritation of respiratory tract.
Eye Contact	May cause redness, itching, and pain. May cause temporary eye irritation.
Skin Contact	Prolonged contact may cause redness and irritation.
Ingestion	Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isopropyl Alcohol 70% 67-63-0	= 4396 mg/kg (Rat)	= 12800 mg/kg (Rabbit)	= 16000 ppm (Rat) 8 h

Information on toxicological effects

Symptoms Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

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 The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Isopropyl Alcohol 67-63-0		Group 3		X

*IARC: (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans
OSHA: (Occupational Safety & Health Administration)
X - Present*

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity None known.

Target Organ Effects Eyes. Respiratory system. Skin. Central nervous system (CNS).

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 (oral)

7,020.00 mg/kg

ATEmix (dermal)

20,440.00 mg/kg (ATE)

ATEmix (inhalation-vapor)

88.81 ATEmix

Product Number: 452AA
Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
Revision Number: 0

12. ECOLOGICAL INFORMATION

There is no ecological data on the Product. The Product ingredients are expected to be safe for the environment at concentrations predicted under normal use and accidental spill scenarios. Packaging components are compatible with the conventional solid waste management practices.

Ecotoxicity

No information available.

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261).

Contaminated Packaging Dispose of in accordance with local regulations.

US EPA Waste Number D001

California Hazardous Waste Codes 331

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

Chemical Name	California Hazardous Waste
Isopropyl Alcohol 70% 67-63-0	Toxic Ignitable

Product Number: 452AA
Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
Revision Number: 0

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name CONSUMER COMMODITY
Hazard Class ORM-D
Description CONSUMER COMMODITY,ORM-D
Emergency Response Guide Number 129

TDG

UN-No UN1219
Proper Shipping Name ISOPROPANOL
Hazard Class 3
Packing Group II
Description UN1219,ISOPROPANOL,3,PG II

MEX

UN-No UN1219
Proper Shipping Name ISOPROPANOL
Hazard Class 3
Packing Group II
Description UN1219 ISOPROPANOL,3,II

ICAO

UN-No UN1219
Proper Shipping Name ISOPROPYL ALCOHOL
Hazard Class 3
Packing Group II
Description UN1219,ISOPROPYL ALCOHOL,3,PG II

IATA

UN-No UN1219
Proper Shipping Name ISOPROPANOL
Hazard Class 3
Packing Group II
Description UN1219,ISOPROPYL ALCOHOL,3,PG II

IMDG/IMO

UN-No UN1219
Proper Shipping Name ISOPROPANOL
Hazard Class 3
Packing Group II
EmS No. F-E, S-D
Description UN1219, ISOPROPANOL,3,PG II

RID

UN-No UN1219
Proper Shipping Name ISOPROPANOL
Hazard Class 3
Packing Group II
Classification Code F1
Description UN1219 ISOPROPANOL,3,II

ADR

UN-No UN1219
Proper Shipping Name ISOPROPANOL
Hazard Class 3
Packing Group II
Classification Code F1
Description UN1219 ISOPROPANOL,3,II

ADN

UN-No UN1219
Proper Shipping Name ISOPROPANOL
Hazard Class 3
Packing Group II
Classification Code F1
Special Provisions 601
Description UN1219 ISOPROPANOL,3,II
Limited Quantity 3
Ventilation LQ4

Product Number: 452AA
Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
Revision Number: 0

15. REGULATORY INFORMATION

International Inventories

TSCA Exempt
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

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Isopropyl Alcohol 70%	67-63-0	50-100	1.0

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

Clean Water Act

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

CERCLA

This material, as supplied, does not contain any ingredients regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

U.S. State Regulations

California Proposition 65 - NONE

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
Isopropyl Alcohol 70% 67-63-0	X	X	X	X	

International Regulations

Mexico - Grade No information available.

National occupational exposure limits

Chemical Name	Carcinogen Status	Exposure Limits
Isopropyl Alcohol 70%		Mexico: TWA 400 ppm Mexico: TWA 980 mg/m ³ Mexico: STEL 500 ppm Mexico: STEL 1225 mg/m ³

Canada

WHMIS Hazard Class

B2

D2B



Product Number: 452AA
Issuing Date: July 7, 2015

Revision Date: None

Product Name: Isopropyl Alcohol 70%
Revision Number: 0

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazard 2	Flammability 3	Instability 0	Physical and Chemical Hazards - None
<u>HMS</u>	Health Hazard 2	Flammability 3	Physical Hazard 0	Personal Protection X

Prepared By WERCS Professional Services, LLC
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date July 7, 2015

Revision Date None

Revision Note None

General 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 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.

Approved and Updated by Vi-Jon, Inc.

Disclaimer:

The information and recommendations contained in the Safety Data Sheet (SDS) are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of this date hereof.

Vi-Jon, however, makes no representation as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving the information will be required to make their own determination as to its suitability for their purposes prior to use. In no event will Vi-Jon be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information.

No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made hereunder with respect to information or the product to which the information refers. The information as supplied herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this SDS. The ultimate compliance with federal, state or local regulations concerning the use of this compound, or compliance with respect to product liability, rests solely upon the purchaser thereof.

End of Safety Data Sheet



Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Revision Date 30-Mar-2015

Revision Number 2

1. Identification

Product Name Urea

Cat No. : U15-3, U15-50, U15-500, U16-3, U16-50, U17-12, U17-212, U16SAM1

Synonyms Carbamide

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

Hazard Statements

Causes skin irritation

Hazards not otherwise classified (HNOC)

None identified

3. Composition / Information on ingredients

Component	CAS-No	Weight %
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Urea	57-13-6	99-99.5
------	---------	---------

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Inhalation	Remove from exposure, lie down. Move to fresh air. If symptoms persist, call a physician. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.
Ingestion	Clean mouth with water. If symptoms persist, call a physician.
Most important symptoms/effects Notes to Physician	No information available. Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Dry chemical. chemical foam.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
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.

Hazardous Combustion Products

Nitrogen oxides (NO_x) Carbon monoxide (CO) Carbon dioxide (CO₂) Ammonia

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	0	N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation.
Environmental Precautions	See Section 12 for additional ecological information.
Methods for Containment and Clean Up	Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.

7. Handling and storage

Handling	Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist. Avoid contact with clothing. Use only in well-ventilated areas. Wash hands before breaks and immediately after handling the product.
-----------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Storage Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

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.

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	Ammonia-like
Odor Threshold	No information available
pH	7.5-9.5 10% aq. solution
Melting Point/Range	131 - 135 °C / 267.8 - 275 °F
Boiling Point/Range	No information available
Flash Point	No information available
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	1.25 mmHg @ 25 °C
Vapor Density	No information available
Relative Density	1.335
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	> 132°C
Viscosity	No information available
Molecular Formula	C H4 N2 O
Molecular Weight	60.06

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, Chlorine, sodium hypochlorite

Hazardous Decomposition Products Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂), Ammonia

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
Urea	8471 mg/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 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
Urea	57-13-6	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects Mutagenic effects have occurred in experimental animals.

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. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Urea	Not listed	16200 - 18300 mg/L LC50 96 h	= 23914 mg/L EC50 Photobacterium phosphoreum 5 min	10000 mg/L EC50 > 24 h 3910 mg/L EC50 = 48 h

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility

Component	log Pow
Urea	-1.59

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
Urea	X	X	-	200-315-5	-		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

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
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

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 contains the following DHS chemicals:

Component	DHS Chemical Facility Anti-Terrorism Standard
Urea	2000 lb STQ

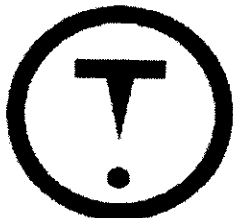
Other International Regulations

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 D2B Toxic materials



16. Other information

Prepared By Regulatory Affairs
 Thermo Fisher Scientific
 Email: EMSDS.RA@thermofisher.com

Revision Date 30-Mar-2015

Print Date 30-Mar-2015

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, INC.

Safety Data Sheet (SDS)

SDS #: 840.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Urea

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 and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Urea	57-13-6	NH ₂ CONH ₂	60.06	

Synonyms: Isourea; Carbamide resin

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 (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).

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.

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

Sweep up, place in 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: Organic #2. Store with alcohols, glycols, amines and amides.
Store in a cool, dry place.

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

White crystals or powder. Slight ammonia odor.
Soluble: Water and alcohol

Melting point: 132.7 °C
Specific gravity: 1.335

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers. Reacts with sodium hypochlorite or calcium hypochlorite to form the explosive nitrogen-trichloride.

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: Possible mutagen.
Target organs: N.A.

ORL-RAT LD₅₀: 8471 mg/kg
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: 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 (200-315-5).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

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

Revision Date: March 21, 2014