

SAFETY DATA SHEET



Advanced Alcohol Gel Hand Sanitizer

Section 1. Identification

GHS product identifier : Advanced Alcohol Gel Hand Sanitizer
Product code : 796
Other means of identification : Not available.
Product type : Liquid.

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

Identified uses	
Hand Sanitizer This is a personal care, cosmetic, or drug product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and drug products, specifically defined by regulations, are exempt from the requirements of a SDS for the consumer. This SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposure such as large spills.	
Uses advised against	Reason
For Industrial and Institutional Use Only	-

Supplier's details : Betco Corporation
400 Van Camp Road
Bowling Green, Ohio 43402
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec (800) 424-9300 24 hour

Section 2. Hazards identification

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

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes serious eye irritation.

Precautionary statements

Prevention :

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Wash hands thoroughly after handling.

Response :

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage :

Store in a well-ventilated place. Keep cool.

Section 2. Hazards identification

- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.
- Other information** : • May be harmful if swallowed.
• May cause eye irritation.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

Ingredient name	%	CAS number
ethanol	≥70 - ≤75	64-17-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

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

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

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

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

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

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

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

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ethanol	<p>ACGIH TLV (United States, 3/2018). STEL: 1000 ppm 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2016). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 5/2018). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.</p>

Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Clear.
- Odor** : Alcohol-like.
- Odor threshold** : Not available.
- pH** : 6 to 8
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: <21.67°C (<71°F) [Setaflash.]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.

Section 9. Physical and chemical properties

Vapor density	: Not available.
Relative density	: 0.88179
Solubility	: Easily soluble in the following materials: cold water. Soluble in the following materials: hot water.
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.

Section 10. Stability and reactivity

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m ³	4 hours
	LD50 Oral	Rat	7 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitization

Not available.

Mutagenicity

Section 11. Toxicological information

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
ethanol	-	1	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Section 11. Toxicological information

- Mutagenicity** : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 100 µl/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.375 µl/l Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
ethanol	-0.35	-	low

Mobility in soil











- Soil/water partition coefficient (K_{oc})** : Not available.

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

Section 13. Disposal considerations

- Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN1993	UN1993	UN1993	UN1993	UN1993	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (ethanol)	FLAMMABLE LIQUID, N.O.S. (ethanol)	FLAMMABLE LIQUID, N.O.S. (ethanol)	FLAMMABLE LIQUID, N.O.S. (ethanol)	FLAMMABLE LIQUID, N.O.S. (ethanol)	FLAMMABLE LIQUID, N.O.S. (ethanol)
Transport hazard class(es)	3  	3  	3 	3  	3  	3 
Packing group	II	II	II	II	II	II
Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

DOT Classification

: This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a. **Limited quantity** Yes.

TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.

ADR/RID

: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Special provisions** 640 (C) **Tunnel code** (D/E)

IMDG

: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

IATA

: The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR:** 2-methylpropan-2-ol; Poly(oxy-1,2-ethanediyl), α-[(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-; 2-(4-tert-butylbenzyl)propionaldehyde
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 311: cyclohexane; propylene oxide

Section 15. Regulatory information

Clean Air Act Section 112 : Listed

(b) Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
propylene oxide	<0.1	Yes.	10000	1444.3	100	14.4

SARA 304 RQ : 44444444.4 lbs / 20177777.8 kg [6044982.3 gal / 22882747.3 L]

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
EYE IRRITATION - Category 2A

Composition/information on ingredients

Name	%	Classification
ethanol	≥50 - ≤75	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A

State regulations

Massachusetts : The following components are listed: ETHYL ALCOHOL; DENATURED ALCOHOL; GLYCERINE MIST

New York : None of the components are listed.

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL; GLYCERIN; 1,2,3-PROPANETRIOL

Pennsylvania : The following components are listed: DENATURED ALCOHOL; ETHANOL; 1,2,3-PROPANETRIOL

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Propylene oxide, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Propylene oxide	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: Not determined.
Canada	: At least one component is not listed.
China	: Not determined.
Europe	: Not determined.
Japan	: Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
Malaysia	: Not determined
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: Not determined.

Section 16. Other information

[Hazardous Material Information System \(U.S.A.\)](#)

Health	/	2
Flammability		3
Physical hazards		0

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 and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

[National Fire Protection Association \(U.S.A.\)](#)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

[Procedure used to derive the classification](#)

Section 16. Other information

Classification	Justification
FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A	On basis of test data Calculation method

History

Date of printing : 3/20/2020

Date of issue/Date of revision : 3/19/2020

Date of previous issue : 12/12/2019

Version : 2.11

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

References : Not available.

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET



Disinfectant Betco Fight Bac RTU

Section 1. Identification

GHS product identifier : Disinfectant Betco Fight Bac RTU
Product code : 311
Other means of identification : Not available.
Product type : Liquid.

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

Identified uses	
Disinfectant	
Uses advised against	Reason
For Industrial and Institutional Use Only	-

Supplier's details : Betco Corporation
400 Van Camp Road
Bowling Green, Ohio 43402
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec (800) 424-9300 24 hour

EPA Details : EPA Statement:
This chemical is a product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-EPA registered chemicals. Below is the signal word as required on the label:

EPA Establishment Number : 4170
EPA Registration Number : 1839-83
EPA Signal Word : Caution

Section 2. Hazards identification

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

Classification of the substance or mixture : EYE IRRITATION - Category 2B

GHS label elements

Signal word : Warning
Hazard statements : Causes eye irritation.

Precautionary statements

Prevention : Wash hands thoroughly after handling.
Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Not available.

Ingredient name	%	CAS number
2-(2-butoxyethoxy)ethanol	≤10	112-34-5
tetrasodium ethylene diamine tetraacetate	≤3	64-02-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

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

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
 irritation
 watering
 redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Section 4. First aid measures

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

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

Section 6. Accidental release measures

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

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
2-(2-butoxyethoxy)ethanol	ACGIH TLV (United States, 3/2017). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor
tetrasodium ethylene diamine tetraacetate	None.

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

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: safety glasses with side-shields

Section 8. Exposure controls/personal protection

Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): disposable vinyl
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Clear. Colorless.
- Odor** : Fruity.-Floral.
- Odor threshold** : Not available.
- pH** : 11.7 to 12.7
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: >100°C (>212°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 1.006
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Flow time (ISO 2431)** : Not available.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : No specific data.

Incompatible materials : Not available.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-(2-butoxyethoxy)ethanol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-
tetrasodium ethylene diamine tetraacetate	LD50 Oral	Rat	10 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-(2-butoxyethoxy)ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
tetrasodium ethylene diamine tetraacetate	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Dermal.
Routes of entry not anticipated: Oral, Inhalation.

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Section 11. Toxicological information

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-(2-butoxyethoxy)ethanol	Acute LC50 1300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
tetrasodium ethylene diamine tetraacetate	Acute LC50 486000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-(2-butoxyethoxy)ethanol	1	-	low
tetrasodium ethylene diamine tetraacetate	5.01	1.8	low

Section 12. Ecological information

Mobility in soil

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

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR:** 2-methylundecanal; 2-(4-tert-butylbenzyl)propionaldehyde
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 311: sodium hydroxide; Formaldehyde, solution

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Section 15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
formaldehyde	≤0.1	Yes.	500	73.9	100	14.8

SARA 304 RQ : 4750593.8 lbs / 2156769.6 kg [566360.1 gal / 2143906.2 L]

SARA 311/312

Classification : EYE IRRITATION - Category 2B

Composition/information on ingredients

Name	%	Classification
2-(2-butoxyethoxy)ethanol	≤10	EYE IRRITATION - Category 2A
tetrasodium ethylene diamine tetraacetate	≤3	ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE - Category 1

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	2-(2-butoxyethoxy)ethanol	112-34-5	≤10
Supplier notification	2-(2-butoxyethoxy)ethanol	112-34-5	≤10

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: GLYCOL ETHERS

Pennsylvania : None of the components are listed.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 15. Regulatory information

Inventory list

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : Not determined.
Malaysia	: Malaysia Inventory (EHS Register) : Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: At least one component is not listed.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: Not determined.

Section 16. Other information

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

Health	/	1
Flammability		1
Physical hazards		0

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 and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
EYE IRRITATION - Category 2B	Expert judgment

History

Date of printing : 3/11/2020

Section 16. Other information

- Date of issue/Date of revision** : 3/11/2020
- Date of previous issue** : 7/30/2019
- Version** : 1.01
- Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations
- References** : Not available.

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



PUR TABS (Dilution 0.5 ppm - 5550 ppm)

Safety Data Sheet - Rev: 1

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 28th March 2019

SECTION 1: Identification

1.1. Identification

Product form : Mixture - Ready to use
 Trade name : PUR TABS (Dilution 0.5 - 5550 ppm)

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Effervescent NaDCC Tablets are used for drinking water disinfection & surface sanitizing and disinfection

1.3. Supplier

Manufactured for:
 EarthSafe Chemical Alternatives, LLC
 145 Wood Road
 Braintree, MA 02184
 T 866-666-2305
 info@earthsafeca.com

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300
 USA:
 IN THE EVENT OF A MEDICAL EMERGENCY CALL YOUR POISON CONTROL CENTER AT 1-800-222-1222
 Have the product container or label with you when calling a poison control center or doctor or going for treatment.

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

No labelling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Troloxene Sodium / 1,3,5 -Triazine - 2,4,6 (1H, 3H,5H) - trione, 1, 3 - dichloro-,sodium salt	(CAS-No.) 2893-78-9	0.00003 - 0.28
Adipic Acid	(CAS-No.) 124-04-9	0.00001 - 0.13
Sodium bicarbonate	(CAS-No.) 144-55-8	0.00001 - 0.12
sodium carbonate	(CAS-No.) 497-19-8	0.000002 - 0.02

PUR TABS (Dilution 0.5 ppm - 5550 ppm)

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SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

See section 11.1. Toxicological information

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Material will not burn. : Use a fire fighting agent suitable for the surrounding fire.

5.2. Specific hazards arising from the chemical

- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

- Protective equipment for firefighters : Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Mechanically recover the product.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : For industrial or professional use only. Avoid release to the environment. Avoid contact with oxidizing agents (e.g. chlorine, chromic acid etc.)
- Hygiene measures : Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store away from heat. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Troclosene Sodium / 1,3,5 -Triazine - 2,4,6 (1H, 3H,5H) - trione, 1, 3 - dichloro-,sodium salt (2893-78-9)
Not applicable
Adipic Acid (124-04-9)
Not applicable

PIUR TABS (Dilution 0.5 ppm - 5550 ppm)

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Sodium bicarbonate (144-55-8)

Not applicable

sodium carbonate (497-19-8)

Not applicable

No occupational exposure limit values exist for the components listed.

8.2. Appropriate engineering controls

Appropriate engineering controls : No engineering controls required.
Environmental exposure controls : Avoid release into the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment (PPE)

Hand/skin protection:

None required.

Eye/face protection:

None required.

Respiratory protection:

None required. Inhalation is unlikely route of exposure in this type of products.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Aqueous Solution
Color : Clear
Odor : Slight chlorine
Odor threshold : No data available
pH : No data available
pH solution : 5.5 - 6.5 For neat form (as supplied)
Melting point : No data available
Freezing point : Not applicable
Boiling point : No data available
Flash point : No flash point
Relative evaporation rate (butylacetate=1) : No data available
Flammability (solid, gas) : Not applicable.
Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : Not applicable
Solubility : completely soluble. (100%) in water.
Log Pow : No data available
Auto-ignition temperature : Not applicable
Decomposition temperature : No data available
Viscosity, kinematic : Not applicable
Viscosity, dynamic : No data available
Explosive limits : Not applicable
Explosive properties : No data available
Oxidizing properties : No data available

9.2. Other Information

No additional information available

PURTABS (Dilution 0.5 ppm - 5550 ppm)

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is generally non-reactive under normal conditions of use, storage and transport, but may reactive with certain agents/certain conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Troclosene Sodium / 1,3,5-Triazine - 2,4,6 (1H, 3H,5H) - trione, 1, 3 - dichloro-,sodium salt (2893-78-9)

LD50 oral rat	735 mg/kg bodyweight
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Sodium bicarbonate (144-55-8)

LD50 oral rat	4220 mg/kg bodyweight
---------------	-----------------------

sodium carbonate (497-19-8)

LD50 dermal rat	2210 mg/kg
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Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

PURTABS (Dilution 0.5 - 5550 ppm)

Persistence and degradability	This material is believed not to persist in the environment. Free available chlorine is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion. The stable degradation products are chloride ion and cyanuric acid. This material is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.
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PURTABS (Dilution 0.5 ppm - 5550 ppm)

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12.3. Bioaccumulative potential

PURTABS (Dilution 0.5 - 5550 ppm)

Bioaccumulative potential

This material hydrolyses in water liberating free available chlorine and cyanuric acid. These products are not bioaccumulative. Bioaccumulation not expected to occur.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Disposal instructions for solution: In appropriate quantities/concentrations (subject to local/national regs.), diluted solutions may be flushed to sanitary sewer.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

USA:

All the ingredients in this preparation are listed in the EPA TSCA Inventory.

This product is registered under FIFRA - PUR TABS EPA registration number: 71847-6-91524

PLEASE REFER TO EPA MASTER LABEL FOR ADDITIONAL SAFETY AND OTHER INFORMATION ON THE MIXTURE

CERCLA/SARA – 302 ext. haz. substances – This material contains hazardous substance (Adipic Acid) as defined by CERCLA/SARA and the Reportable Quantity is 5000lbs.

SARA (311,312) – This product is categorized as an immediate health hazard, and fire and reactivity physical hazard (Sodium Dichloroisocyanurate)

Massachusetts Right-to-Know Hazardous Substances list – Listed (Adipic Acid, Sodium Dichloroisocyanurate)

New Jersey Right-to-Know Hazardous Substances list – Listed (Adipic Acid, Sodium Dichloroisocyanurate)

Pennsylvania Right-to-Know Hazardous Substances list – Listed (Adipic Acid, Sodium Dichloroisocyanurate)

Rhode Island Right-to-Know Hazardous Substances list – Listed (Adipic Acid, Sodium Dichloroisocyanurate)

Workplace Classification – This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200) THIS SAFETY DATA SHEET IS FOR READY TO USE SOLUTION.

15.2. International regulations

Canada:

Canadian Chemical Inventory (DSL) – Listed

WHMIS hazard class –

D2B toxic materials

For Sodium dichloroisocyanurate:

C oxidizing materials

D1B toxic materials

PUR TABS (Dilution 0.5 ppm - 5550 ppm)

Safety Data Sheet - Rev: 1



according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

For Sodium Carbonate:
E corrosive materials

The active substance is also listed in the following chemical inventories:

- Australian Chemical Inventory (AICS) – Listed
- China Chemical Inventory (IECSC) – Listed
- European Union Inventory (EINECS) – Reported
- Japan Chemical Inventory (ENCS) – Listed
- Korean Chemical Inventory (KECI) – Listed
- New Zealand Chemical Inventory (NZIOC) – Listed
- Philippines Priority Chemical List (PICCS) – Listed

The mixture is generally classified and registered as a disinfectant, biocide, or pesticide.

EU Regulation: If required for sale in Ireland (country of origin), the mixture is notified to the Pesticide Control Service, Department of Agriculture, Food and the Marine as a biocide under its appropriate trade name. The product is generally classified as a biocide in the EU, and as such is subject to regulation under EU Regulation No. 528/2012 (Biocidal Products Regulation).

SECTION 16: Other information

NFPA Hazard Classification

Health: 0 Flammability: 0 Instability: 0 Special Hazards: None

HMIS Hazard Classification

Health: 0 Flammability: 0 Physical Hazard: 0 Personal Protection: See PPE Section

HAZARD RATINGS/ GRADO DE PELIGRO		
HMIS		NFPA
0	HEALTH: 0	0
0	FLAMMABILITY: 0	0
0	PHYSICAL HAZARD: 0	0

SDS US (GHS HazCom 2012) Prop 65 Correction

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

REVISION HISTORY:

Revision No. 1 – SDS prepared to cover all in-use dilutions of PUR TABS product
Supersedes Date: 5/23/18



DISCLAIMER: The information on this SDS is believed to be correct as of the date of issue. EarthSafe Chemical Alternatives, LLC makes NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether this product is fit for a particular purpose and suitable for user's method of use or application.



SECTION 1: Identification

Product Name	105 Sanitizer	Product Code	Product Central	PC105
			Stetson/Stetco	PC1051/PC1055/PC105INS
Recommended Use	Hard surface sanitizer			
Supplier	M.D. Stetson Company, Inc. 92 York Avenue Randolph, MA 02368 781-986-6161	Emergency Telephone		
		INFOTRAC: 1-800-535-5053		

SECTION 2: Hazard(s) identification

DANGER  	Hazards not otherwise classified or not covered by GHS		
	Right to know chemicals. Acute and chronic health hazards		
Hazard Statement	Hazard Class (GHS Chapter)	Hazard Category	
Causes severe skin burns and eye damage	Skin corrosion/irritation (3.2)	1	
Harmful if swallowed or in contact with skin	Acute Toxicity oral (3.1) Acute toxicity dermal (3.1)	4	

Precautionary Statement

Do not breathe mists.
Wash face and hands and exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective nitrile gloves, protective clothing and safety eyewear.
If swallowed, rinse mouth. DO NOT induce vomiting. Call a poison center/medical professional if you feel unwell.
If in contact with skin, remove contaminated clothing immediately and wash before reuse. Rinse skin thoroughly with water or shower.
If inhaled, remove person to fresh air and keep comfortable for breathing.
If in contact with eyes, rinse carefully with water for several minutes. Remove contact lenses if easy to do. Continue rinsing.
Avoid release to the environment. Collect spillage.
Dispose of contents/container in accordance with local/state/federal and international regulations. Offer surplus and non-recyclable solutions to a licensed disposal company.

SECTION 3: Composition/Information on Ingredients

Chemical identity	Common name, synonyms, etc.	CAS #	%
Quaternary ammonium compounds, di-C ₈ -C ₁₀ -alkyldimethyl, chlorides		68424-95-3	4.00 - 8.00
Quaternary ammonium compounds, benzyl-C ₁₂ -C ₁₆ -alkyldimethyl, chlorides		68424-85-1	3.00 - 5.00
Ethanol	Ethyl alcohol	64-17-5	0.50 - 3.00

SECTION 4: First Aid Measures

If medical advice is needed, have product container or label at hand.

Necessary measures for routes of exposure	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting without medical advice. Call Poison Center, 911 or emergency medical professional.
	IF ON SKIN: Rinse affected areas with plenty of soap and water or shower. Remove contaminated clothing and wash before reuse. If irritation occurs get medical advice/attention.
	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	IF IN EYES: Rinse carefully with water for several minutes. Remove contact lenses if easy to do. Continue rinsing.
Most important symptoms/effects, acute and delayed.	Acute exposure may cause skin or eye irritation.
Immediate medical attention and special treatment, if necessary	Do not breathe mists. Move victim to fresh air. Immediately call poison center, 911 or medical aid.

SECTION 5: Fire-fighting Measures

Suitable extinguishing media.	Dry chemical, CO ₂ , alcohol resistant foam or water spray
Specific hazards arising from the chemical	Heating or fire can release toxic gas.
Special protective equipment and precautions for fire-fighters.	Wear chemical-protective clothing specifically recommended by the manufacturer. It may provide little or no thermal protection. In the event of fire, wear positive pressure self-contained breathing apparatus (SCBA).
Emergency Response Guide Number	154

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures.	Use respirator when performing operations involving potential exposure to vapor of the product.
Environmental precautions.	Prevent entry into waterways, sewers, basements or confined areas. Collect spillage with non-combustible absorbent material.
Methods and materials for containment and cleaning up.	Absorb or cover with non-combustible absorbent material and transfer to containers. Collect spillage. Contact a licensed professional waste disposal service to dispose of this material.

SECTION 7: Handling and Storage

Precautions for safe handling.	Do not eat, drink or smoke in areas where this material is used. Avoid contact with skin and eyes. Avoid inhalation of mist. After handling, always wash hands thoroughly with soap and water. Wear protective nitrile gloves and safety eye glasses. Use only with adequate ventilation/personal protection.
Conditions for safe storage, including any incompatibilities.	Keep away from ignition sources, heat, hot surfaces, sparks, and open flames. Store containers in a cool, dry, ventilated area away from sources of ignition and incompatible materials. Keep containers tightly closed and properly labeled. Store in original containers.

SECTION 8: Exposure Controls/Personal Protection

Component	CAS No.	Value	Exposure	Basis
Ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		REL	1,000ppm, 1,900 mg/m ³	NIOSH
		STEL	1,000 ppm	ACGIH
Control parameters	Avoid skin contact with this product. Avoid eye contact. Long term exposure could irritate skin and eyes. Collect spillage.			
Appropriate engineering controls	Respiratory equipment is required where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination or type ABEK respirator cartridges as a backup to engineering controls. Provide local ventilation.			
Individual protection measures	Wear tightly fitted safety goggles or face shield. Handle with nitrile gloves which have been inspected prior to use.			

SECTION 9: Physical and Chemical Properties

Appearance	Clear liquid	Specific Gravity	0.99-1.03 g/ml
Odor	Very slight alcohol odor	Flash Point/ boiling point	NA/212°F
VOC Concentrate/As used	<0.8%/<0.01%	Solubility in Water	Complete
pH Concentrate/ As used	6.0 - 9.0/6.0 - 8.0	Evaporation Rate	Similar to water

SECTION 10: Stability and Reactivity

Reactivity	No data available.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available.
Conditions to avoid	Heat, flames and ignition sources.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No data available

SECTION 11: Toxicological Information

IARC	Human carcinogen – Ethanol CAS 64-17-5
ACGIH	Confirmed animal carcinogen with unknown relevance to humans – Ethanol CAS 64-17-5
NTP	No component of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by NTP
OSHA	No component of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by OSHA

SECTION 11: Toxicological Information (continued)

Additional Information	Quaternary ammonium compounds, benzyl-C ₁₂ -C ₁₆ -alkyldimethyl, chlorides CAS68424-85-1 Acute oral toxicity (LD50) ca 344 mg/kg Species Rat Acute Dermal Toxicity (LD50) ca 3,340 mg/kg Species Rabbit exposure 24 hrs. Corrosive to Eyes, DOT method, species Rabbit Skin Corrosive Species Rabbit exposure 24 hrs. Respiratory Sensitizer Buehler Test, Guinea Pig Negative Genotoxicity in vitro using Ames Test
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SECTION 12: Ecological Information

No data available.

SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/state/federal and international regulations. Collect spillage. Triple rinse containers and offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dispose of contaminated packing as unused product.

SECTION 14: Transport Information

**DOT Packaging Exception 173.150, b,2,d,
 Limited Quantities not over 1.3 gals (Inner packaging not over 1.3 gals)
 If shipped by aircraft, rail or vessel see 49 CFR 172.101 Hazardous Materials Table**

DOT Number	UN1760	Packaging Group	III	Hazard Class	8
Shipping Name	Corrosive Liquid, n.o.s. (Quaternary Ammonium Compound)		Placard	Corrosive 8	

Special Provisions for Bulk Transport (>119 gals. container for liquids) Corrosive 8 Placard

SECTION 15: Regulatory Information

This product is an US EPA registered product, EPA Registration No. 6836-266-1674
 This material does not contain any components subject to the reporting requirements of SARA Title III, Section 302.
 This material does not contain any components subject to the reporting levels established by SARA Title III, Section 313
 This product is a SARA 311/312 Hazardous chemical, Acute Health Hazard, Fire Hazard

Ethanol CAS 64-17-5 is a MA, PA and NJ Right to Know chemical.

California Prop. 65: WARNING. This product does contain a chemical know to the State of California to cause cancer. This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.

SECTION 16: Other Information


Revision prepared 07/06/2018 by Gene Ricciardelli in accordance with OSHA 29 CFR 1910.1200, for USA use only.
 Previous version dated 01/02/2018.



SECTION 1: Identification

Product Name	103 Disinfectant 256	Item Code	HBV1031
Recommended Use	Hard surface disinfectant		
Supplier	M.D. Stetson Company, Inc. 92 York Avenue Randolph, MA 02368 781-986-6161	Emergency Telephone	
		INFOTRAC: 1-800-535-5053	

SECTION 2: Hazard(s) identification

 DANGER	Hazards not otherwise classified or not covered by GHS		
	Right to know chemicals. Acute and Chronic Health Hazards		

Hazard Statement	Hazard Class (GHS Chapter)	Category
Causes severe skin burns and eye damage	Skin corrosion/irritation (3.2)	1
Flammable liquid and vapor	Flammable Liquids (2.6)	3
Harmful if swallowed or in contact with skin	Acute Toxicity, oral (3.1), Acute Toxicity Dermal (3.1)	4

Precautionary Statement

Keep away from heat, hot surfaces, sparks, open flames and ignition sources. No smoking
Do not directly breathe dusts or mists.
Wash face, hands and exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective nitrile gloves, protective clothing and safety eyewear.
If swallowed, rinse mouth. Do not induce vomiting. Call a poison center or medical professional if you feel unwell.
If on skin, remove contaminated clothing immediately. Rinse skin with water or shower.
Wash contaminated clothing before reuse.
If inhaled, remove person to fresh air and keep comfortable for breathing,
If in eyes, rinse carefully with water for several minutes. Remove contact lenses if easy to do. Continue rinsing.
Avoid release to the environment. Collect spillage.
Keep container tightly closed. Store in a well-ventilated place.
Dispose of contents/container in accordance with local/state/federal and international regulations. Offer surplus and non-recyclable solutions to a licensed disposal company.
In case of fire, use dry sand, dry chemical or alcohol-resistant foam to extinguish.

SECTION 3: Composition/Information on Ingredients

Chemical identity	Common name, synonyms, etc.	CAS #	%
Alkyl dimethyl benzyl ammonium chloride	Quaternary ammonium compounds, di -C ₈ -C ₁₀ -alkyldimethyl, chlorides.	68424-95-3	10-15
Alkyl dimethyl benzyl ammonium chloride	Quaternary ammonium compounds, benzyl-C ₁₂ -C ₁₆ -alkyldimethyl chlorides	68424-85-1	5-10
Ethanol	Ethyl alcohol,	64-17-5	1-5

SECTION 4: First Aid Measures

If medical advice is needed, have product container or label at hand.

Necessary measures for routes of exposure	IF SWALLOWED: Immediately call a poison center or doctor. Rinse mouth. DO NOT induce vomiting. Call poison center, 911 or emergency medical service. Never give anything by mouth to an unconscious person.
	IF ON SKIN: Remove contaminated clothing and wash before reuse. Rinse affected areas with plenty of soap and water or shower. If irritation occurs get medical attention.
	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	IF IN EYES: Rinse carefully with water for several minutes. Remove contact lenses if easy to do. Continue rinsing.

Most important symptoms/effects, acute and delayed.

Acute exposure may cause skin or eye irritation.

Immediate medical attention and special treatment, if necessary

Do not breathe dusts or mists. Move victim to fresh air. Immediately call poison center, 911 or medical aid.

SECTION 5: Fire-fighting Measures

Suitable extinguishing media.

Dry chemical, CO₂, alcohol resistant foam or water spray

Specific hazards arising from the chemical

Corrosive to skin and may cause eye damage. Do not touch or walk through spilled area. Water spray may reduce vapor, but may not prevent ignition in closed spaces. Do not breathe mist of vapor.

Special protective equipment and precautions for fire-fighters.

Wear positive pressure, self-contained breathing apparatus (SCBA). Wear chemical protective clothing specifically recommended by the manufacturer. It may provide little or no thermal protection.

Emergency Response Guide Number

153

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures.

Keep away from clothing and other combustible materials. Chemically protective gloves, clothing and safety eyewear are required. Remove sources of ignition. Do not breathe mist or vapor. Evacuate personnel to safe areas.

Environmental precautions.

Prevent entry into waterways, sewers, basements or confined areas. Collect spillage. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up.

Prevent entry into waterways, sewers, basements or confined areas. Absorb or cover with non-combustible absorbent material and transfer to containers. Collect spillage. Contact a licensed professional waste disposal service to dispose of this material.

SECTION 7: Handling and Storage

Precautions for safe handling.	Do not eat, drink or smoke in areas where this material is used. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. After handling, always wash hands thoroughly with soap and water. Wear protective nitrile gloves, protective clothing, and eye/face protection. Use only with adequate ventilation/personal protection.
Conditions for safe storage, including any incompatibilities.	Keep away from ignition sources, heat, hot surfaces, sparks, and open flames. No smoking. Store containers in a cool, dry, ventilated area away from sources of ignition and incompatible materials. Keep containers tightly closed and properly labeled. Store in original containers.

SECTION 8: Exposure Controls/Personal Protection

Component	CAS #	Type	Value	Basis
Ethanol	64-17-5	TWA	1ppm	ACGIH
		REL	1ppm, 2mg/m ³	NIOSH
		STEL	1,000 ppm	ACGIH
Control parameters	Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and after the workday. Collect spillage.			
Appropriate engineering controls	Respiratory equipment is required where risk assessment shows air-purifying respirators are appropriate. Use a full-face respirator with multi-purpose combination or type ABEK respirator cartridges as a backup to engineering controls. Provide local ventilation.			
Individual protection measures	Handle with nitrile gloves which have been inspected prior to use. Wear tightly fitted safety goggles or face shield. Long term exposure could irritate skin and eyes.			

SECTION 9: Physical and Chemical Properties

Appearance	Green transparent liquid	Specific Gravity	0.99-1.05 g/ml
Odor	Floral	Flash Point/Boiling Point	NA/212°F
Volatile Organic Compound	2-3%	Solubility in Water	Complete
pH Concentrate/ As used	12-13 / 8-9	Evaporation Rate	Similar to water

SECTION 10: Stability and Reactivity

Reactivity	No data available.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available.
Conditions to avoid	Heat, flames and ignition sources.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No data available

SECTION 11: Toxicological Information

IARC	No component of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.
ACGIH	No component of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by ACGIH
NTP	No component of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by NTP
OSHA	No component of this product is present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by OSHA
Additional Information	<u>N-Alkyl(C12-16)-N,N-dimethyl-N-benzyl ammonium chloride CAS 68424-85-1</u> Acute Oral Toxicity LD50- Rat- 344mg/kg. Acute Dermal Toxicity LD50- Rabbit- 3340 mg.kg. Skin irritation rabbit – Corrosive DOT method

SECTION 12: Ecological Information

No data available on mixture.

SECTION 13: Disposal Considerations

Dispose of contents/container in accordance with local/state/federal and international regulations. Collect spillage. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dispose of contaminated packing as unused product.

SECTION 14: Transport Information

**DOT Packaging Exception 173.150, b,2,d,
Limited Quantities not over 1.3 gals (Inner packaging not over 1.3 gals)
If shipped by aircraft, rail or vessel see 49 CFR 172.101 Hazardous Materials Table**

DOT Number	UN1903	Packaging Group	III	Hazard Class	8	Placard	Corrosive 8
Shipping Name	Disinfectants Liquid, Corrosive n.o.s. (Quaternary Ammonium compound)						
Special Provisions for Bulk Transport (>119 gals container for liquids) Corrosive 8 Placard							

SECTION 15: Regulatory Information

This product is an US EPA registered product , EPA Registration No 6836-78-1674
This material does not contain any components subject to the reporting requirements of SARA Title III, Section 302.
This material does not contain any components subject to the reporting levels established by SARA Title III, Section 313
This product is a SARA 311/311 Hazardous chemical, Acute Health Hazard, Fire Hazard

Ethanol CAS 64-17-5 is a MA, PA and NJ Right to Know Chemical.

California Prop. 65: This product does contain a chemical know to the State of California to cause cancer. This product contains a chemical know to the state of California to cause birth defects or other reproductive harm. Ethanol CAS 64-17-5

SECTION 16: Other Information

Prepared 06/21/2017 by Gene Ricciardelli in accordance with OSHA 29 CFR 1910.1200, for USA use only.