

- Do not breathe dust/fume/gas/mist/vapors/spray
 - Wear protective gloves/protective clothing/eye protection/face protection
- Precautionary Statements - Response**
- Immediately call a POISON CENTER or doctor/physician
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 - Wash contaminated clothing before reuse
 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 - Rinse mouth
 - Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other information

- May be harmful if swallowed

Unknown Acute Toxicity

0.2% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

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

Chemical Name	CAS-No	Weight-%	Trade Secret
Alkyl (C12-16) dimethylbenzylammonium chloride	68424-85-1	4	*
Octyl Decyl Dimethyl Ammonium Chloride	32426-11-2	3	*
Dioctyl dimethyl ammonium chloride	5538-94-3	1.5	*
Didecyldimethylammonium chloride	7173-51-5	1.5	*
Ethanol	64-17-5	1% - 2%	*

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

4. FIRST AID MEASURES

First aid measures for different exposure routes

- General advice** Show this safety data sheet to the doctor in attendance. Call a poison control center or doctor for treatment advice. Have the product containers or label with you when calling a poison control center or doctor, or going for treatment.
- Eye contact** Hold eye open & rinse with water for 15-20 min. Remove contact lenses, if present, after 5 min, then continue rinsing eyes. Call poison control center or doctor for advice.
- Skin contact** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control center or doctor for treatment advice.
- Inhalation** Move to fresh air. If not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth to mouth. Call poison control center or doctor for treatment advice.

Ingestion Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. .

Protection of First-aiders Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms/effects, acute and delayed

Main Symptoms The most important known symptoms and effects are described in the labelling in section 2 and/or in section 11.

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

Notes to physician Probable mucosal damage may contraindicate the use of gastric lavage.

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

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products Toxic hydrogen chloride, oxides of carbon & nitrogen.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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 skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions

Environmental precautions Prevent large spills from entering waterways or confined areas.

Methods and materials for containment and cleaning up

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

Methods for cleaning up Small spills may be mopped up, flushed away with water or absorbed on some inert absorbent material and incinerated. Large spills should be contained, the material then moved into containers and disposed of by approved methods for hazardous wastes.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Do not eat, drink or smoke when using this product. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Wash thoroughly after work using soap and water. Do not contaminate water, food, or feed by storage or disposal.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Avoid excessive heat--do not exceed storage temperatures of 100° F. Non-refillable container. Open dumping is prohibited. Store only in original container. Do not reuse empty container. If a leaky container must be contained within another, mark the outer container to identify the contents. Store this product away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep this product under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

Incompatible products Anionic Surfactants.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines Review Section 3 & 4 for Exposure Guidelines.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³

Appropriate engineering controls

Engineering Measures Ensure that eyewash stations and safety showers or an equivalent method of decontamination are close to the work location. Ensure adequate ventilation, especially in confined areas

Individual protection measures, such as personal protective equipment

- Eye/Face Protection** Splash-proof chemical goggles or face shield.
- Skin and body protection** Wear appropriate chemical resistant clothing and chemical resistant gloves.
- Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties

Physical state	Liquid	Odor	Quaternary
Appearance	Transparent	Odor Threshold	No information available
Color	Colorless		

Property	Values	Remarks • Methods
pH	7.0	
Melting/freezing point	No information available	
Boiling point/boiling range	~ 100 °C / 212 °F	
Flash Point	No information available	TCC
Evaporation rate	About the same as water	Similar to water
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	

Lower flammability limit	No information available	
Vapor pressure	NE	
Vapor density	NE	
Relative density	0.989 +/- 0.005	
Water solubility	Completely soluble.	
Solubility in other solvents	No information available	No information available
Partition coefficient: n-octanol/water	No information available	No information available
Autoignition temperature	No information available	No information available
Decomposition temperature	No information available	No information available
Viscosity, kinematic	No information available	No information available
Viscosity, dynamic	No information available	No information available
Explosive properties	Not explosive	
Oxidizing Properties	Not an oxidizer	

Other information

Softening point	N/A
Molecular Weight	N/A
VOC Content(%)	< 2%
Density VALUE	N/A
Bulk Density VALUE	N/A

10. STABILITY AND REACTIVITY**Chemical stability**

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

Extremes of temperature and direct sunlight.

Incompatible Materials

Anionic Surfactants.

Hazardous Decomposition Products

May produce toxic fumes of hydrogen chloride, organic chlorides, amines, ammonia, and oxides of carbon and nitrogen.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Product Information	Causes severe skin burns and eye damage Harmful if swallowed
Inhalation	Irritating to respiratory system.
Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	Contact causes severe skin irritation and possible burns.
Ingestion	Harmful if swallowed. Severe irritation of the gastrointestinal tract, causing vomiting, nausea and burns.

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
Alkyl (C12-16) dimethylbenzylammonium chloride 68424-85-1	= 426 mg/kg (Rat)	-	-
Didecyldimethylammonium chloride 7173-51-5	= 84 mg/kg (Rat)	-	-
Ethanol 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

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

Sensitization None known.
Mutagenic effects None known.
Carcinogenicity Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol 64-17-5	A3	Group 1	Known	X

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Reproductive toxicity None known.
Developmental Toxicity None known.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic toxicity No known effect. This product contains no substances suspected of causing genetic defects, birth defects, developmental toxicity, or reproductive toxicity.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0.2% of the mixture consists of ingredient(s) of unknown toxicity

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

Oral LD50 3,649.00
Mist 11,084.40

12. ECOLOGICAL INFORMATION

Ecotoxicity

76.57% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ethanol 64-17-5	-	100: 96 h Pimephales promelas mg/L LC50 static 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static 9268 - 14221: 48 h Daphnia magna mg/L LC50

Persistence and degradability
 No data is available on the product itself.

Bioaccumulation
 Not likely to bioaccumulate.

Mobility
 Will likely be mobile in the environment due to its water solubility.

Chemical Name	Partition coefficient
Ethanol 64-17-5	-0.32

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste Disposal Methods Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste

Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product.

Contaminated packaging Non-refillable container. Empty containers should be triple rinsed, then offered for recycling or reconditioning; or puncture and dispose of in a sanitary landfill. .

Chemical Name	California Hazardous Waste Status
Ethanol 64-17-5	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT	Regulated
UN/ID No	UN1903
Proper shipping name	Disinfectants, Liquid, Corrosive, n.o.s. (Quaternary Ammonium Compounds)
Hazard class	8
Packing Group	III
Emergency Response Guide Number	153

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not Comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	-

Legend:

TSCA - All components of this product are listed or are exempt or excluded from listing on the United States Toxic Substances Control Act Section 8(b) Inventory.
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	no

Fire Hazard no
Sudden Release of Pressure Hazard no
Reactive Hazard no

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.

U.S. State Regulations

California Proposition 65

Ethyl alcohol is only a considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

Chemical Name	California Prop. 65
Ethanol - 64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations

This product contains substances regulated by state right-to-know regulations.

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethanol 64-17-5	X	X	X

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

DANGER. Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed, inhaled or absorbed through the skin. This pesticide is toxic to fish and aquatic invertebrates.

16. OTHER INFORMATION

NFPA	Health Hazards 2	Flammability 0	Instability 0	Physical and chemical hazards COR
HMIS	Health hazard 2	Flammability 0	Physical hazards 0	Personal protection X

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Issue Note

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