

Chemical name	Common name and synonyms	CAS number	%
ISOPROPYL ALCOHOL		67-63-0	1 - 5
Composition comments	Percent by volume concentration of ETHYL ALCOHOL (64-17-5) is 70% (v/v).		
	Meets Alcohol Requirements stated in FDA Tentative Final Monograph for OTC Healthcare Antiseptic Drug Products – 21 CFR Part 333.410 (a).		
4. First-aid measures			
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.		
Skin contact	If irritation occurs, flush skin with plenty of water. Call a physician if irritation persists.		
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.		
Ingestion	Rinse mouth. Do not induce vomiting without advice from poison control center. Get medical attention if symptoms occur.		
Most important symptoms/effects, acute and delayed	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.		
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.		
General information	Wash contaminated clothing before reuse.		
5. Fire-fighting measures			
Suitable extinguishing media	Alcohol resistant foam. Water fog. Carbon dioxide (CO ₂). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.		
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.		
Specific hazards arising from the chemical	Flammable liquid - may release vapors that form flammable mixtures at or above the flash point. During fire, gases hazardous to health may be formed.		
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.		
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.		
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.		
General fire hazards	Highly flammable liquid and vapor.		
6. Accidental release measures			
Personal precautions, protective equipment and emergency procedures	Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Local authorities should be advised if significant spillages cannot be contained.		
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge.		
	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.		
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.		
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.		
7. Handling and storage			
Precautions for safe handling	For external use only. Keep out of the reach of children. Do not get this material in contact with eyes. Wear gloves and safety glasses or goggles if handling large quantities. Do not handle or store near an open flame, heat or other sources of ignition. When using do not smoke.		

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Eliminate sources of ignition. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
ETHYL ALCOHOL (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm
ISOPROPYL ALCOHOL (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
ETHYL ALCOHOL (CAS 64-17-5)	STEL	1000 ppm
		400 ppm
ISOPROPYL ALCOHOL (CAS 67-63-0)	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
ETHYL ALCOHOL (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
ISOPROPYL ALCOHOL (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
ISOPROPYL ALCOHOL (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection

None necessary under normal conditions of use. Wear safety glasses or goggles if handling large quantities.

Skin protection

Hand protection

None necessary under normal conditions of use. Wear appropriate gloves if handling large quantities.

Other

None necessary under normal conditions of use. Wear appropriate gloves if handling large quantities.

Respiratory protection

Under normal conditions of use respiratory protection is not expected to be required.

Thermal hazards

Not applicable.

General hygiene considerations

When using do not smoke.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Foam when dispensed.
Color	Clear light green
Odor	Alcohol
Odor threshold	Not available.
pH	6 - 9
Melting point/freezing point	-173.38 °F (-114.1 °C) estimated
Initial boiling point and boiling range	173.3 °F (78.5 °C) estimated
Flash point	68.0 °F (20.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature 685 °F (362.78 °C) estimated

Decomposition temperature Not available.

Viscosity Not available.

Other information

Flammability class Flammable IB estimated

Specific gravity 0.9

10. Stability and reactivity

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

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Hazardous polymerization does not occur.

Conditions to avoid Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents. Acids. Metals. Chlorine.

Hazardous decomposition products Small amounts of nitrogen oxides, carbon monoxide, carbon dioxide and hydrocarbons may be released.

11. Toxicological information

Information on likely routes of exposure

Inhalation No effects expected under normal conditions of use.

Skin contact No effects expected under normal conditions of use. Prolonged skin contact may cause temporary irritation.

Eye contact Causes serious eye irritation.

Ingestion No effects expected under normal conditions of use. May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
ETHYL ALCOHOL (CAS 64-17-5)		
Acute		
Inhalation		
LC50	Rat	117 - 125 mg/l, 4 Hours
Oral		
LD50	Rat	9.9 g/kg
ISOPROPYL ALCOHOL (CAS 67-63-0)		
Acute		
Oral		
LD50	Rat	5.84 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not hazardous under normal conditions of use.

Ethanol: Chronic ingestion of ethanol in alcoholic beverages is classified by IARC as Group 1 Carcinogenic to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Not hazardous under normal conditions of use. Chronic ingestion of ethanol can cause reproductive/developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Not hazardous under normal conditions of use. Chronic ingestion of ethanol can cause liver toxicity.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
enMotion® Foam Hand Sanitizer with Moisturizers		
Aquatic		
Fish	LC50 Fish	19738.7383 mg/l, 96 hours estimated

Components	Species	Test Results
ETHYL ALCOHOL (CAS 64-17-5)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 13400 - 15100 mg/l, 96 hours
ISOPROPYL ALCOHOL (CAS 67-63-0)		
Aquatic		
Fish	LC50	<i>Pimephales promelas</i> 10000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

ETHYL ALCOHOL	-0.31
ISOPROPYL ALCOHOL	0.05

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	This product, if discarded as supplied, is considered a hazardous waste under RCRA, D001.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 F
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

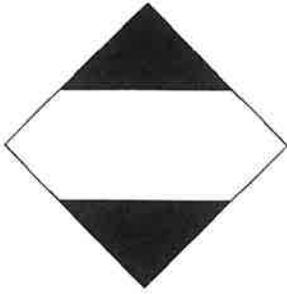
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UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (ISOPROPYL ALCOHOL, ETHYL ALCOHOL), Limited Quantity
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Not available.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242

IMDG

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (ISOPROPYL ALCOHOL, ETHYL ALCOHOL), Limited Quantity
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Not available.

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



15. Regulatory information

US federal regulations

SDS prepared pursuant to the Hazard Communication Standard (29 CFR 1910.1200). This product is regulated under the US Federal Food, Drug, and Cosmetic Act.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Flammable (gases, aerosols, liquids, or solids)
Serious eye damage or eye irritation
Hazard not otherwise classified (HNOC)

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

ISOPROPYL ALCOHOL (CAS 67-63-0)

16. Other information, including date of preparation or last revision

Issue date	September-22-2016
Revision date	January-17-2019
Version #	02
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 3
Instability: 0

Disclaimer

This SDS is intended to quickly provide useful information to the user(s) of this material or product. It is not intended to serve as a comprehensive discussion of all possible risks or hazards, and it assumes a reasonable use of the product. The information contained in this SDS is believed to be accurate as of the date of preparation of this SDS and has been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. The user or handler (or their employer) should consider the specific conditions in which this material will be used, handled, or stored and determine what specific safety or other precautions are required. Employers should ensure that their employees, agents, contractors, and customers who will use the product receive adequate warnings and safe handling procedures, including a current SDS. Product users or handlers (or their employer) who are unsure of what specific precautions are required should consult their employer, product supplier, or safety or health professionals before handling or working with this product. Please notify us immediately if you believe this SDS or other safety and health information about this product is inaccurate or incomplete.

Revision information

Accidental release measures: Personal precautions, protective equipment and emergency procedures

Accidental release measures: Methods and materials for containment and cleaning up

Handling and storage: Conditions for safe storage, including any incompatibilities

Exposure controls/personal protection: Occupational exposure limits

Transport Information: Material Transportation Information

Transport information: General information

Regulatory information: California Proposition 65