


2. HAZARDS IDENTIFICATION

Classification

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

Flammable liquids	Category 2
Eye Irritation	Category 2A

Signal word	Warning
Hazard statements Highly flammable liquid and vapor	
	
Appearance Clear, colorless	Physical State Thin liquid
	Odor Alcohol

Precautionary Statements - Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

Precautionary Statements - Response

In case of fire: Use dry chemical, carbon dioxide (CO₂), foam, or water spray to extinguish.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal

Dispose of contents in accordance with all applicable federal, state, and local regulations.

Hazards not otherwise classified (HNOC)

Inhalation of high concentrations of vapor or mist may cause irritation of the respiratory tract, headaches, dizziness, nausea, vomiting, and malaise. Ingestion may cause central nervous system depression, gastrointestinal irritation, nausea, vomiting, and diarrhea.

Other information

May cause slight eye irritation.

Interactions with Other Chemicals

Can react with strong oxidizers, inorganic acids, and halogens.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %	Trade Secret
Ethanol	64-17-5	66 - 76	*
Isopropyl alcohol	67-63-0	5 - 10	*

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

4. FIRST AID MEASURES

First aid measures

General Advice	Show this safety data sheet to the doctor in attendance.
Eye Contact	Hold eye open and rinse slowly and gently with water for 15–20 minutes. If present, remove contact lenses, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
Skin Contact	Not applicable.
Inhalation	Move to fresh air. If breathing problems develop, call a doctor.
Ingestion	Drink a glassful of water. Call a doctor or poison control center.
Protection of First-aiders	Remove all ignition sources. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects	May cause slight eye irritation.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, carbon dioxide (CO₂), foam, or water spray.

Unsuitable Extinguishing Media

Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

Alcohol flames may not be readily visible. Vapors are heavier than air and may travel to source of ignition and flash back. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

Oxides of carbon.

Explosion Data

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

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Take precautionary measures against static discharges.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions Prevent entry into surface water or sanitary sewers. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

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

Methods for Cleaning Up Eliminate all potential sources of ignition, and ventilate area. Absorb and containerize. Do not flush into surface water or sanitary sewer system.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice.
Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Store in accordance all applicable regulations and fire codes. Keep containers tightly closed in a cool, well-ventilated place away from heat, sparks, open flames, and hot surfaces.

Incompatible Products Strong oxidizers, inorganic acids, and halogens.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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 10% LEL TWA: 1000 ppm TWA: 1900 mg/m ³

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

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

10. STABILITY AND REACTIVITY

Reactivity

Can react with strong oxidizers, inorganic acids, and halogens.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None known.

Conditions to avoid

Keep away from heat, sparks, open flames, and hot surfaces.

Incompatible materials

Strong oxidizers, inorganic acids, and halogens.

Hazardous Decomposition Products

None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Inhalation of high concentrations of vapor or mist may cause irritation of the respiratory tract, headaches, dizziness, nausea, vomiting, and malaise.
Eye Contact	May cause slight irritation.
Skin Contact	Prolonged or repeated use may cause dryness and/or slight irritation.
Ingestion	Ingestion may cause central nervous system depression, gastrointestinal irritation, nausea, vomiting, and diarrhea.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol 64-17-5	-	-	125 mg/L (Rat, 4 h)
Isopropyl alcohol 67-63-0	4.4 g/kg (Rat)	12.9 g/kg (Rabbit)	16000 (Rat, 8 h)

Information on toxicological effects

Symptoms May cause slight redness and tearing of eyes.

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

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. 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
Isopropyl alcohol 67-63-0	-	Group 3	-	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans; Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive Toxicity Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage.

STOT - single exposure No information available.

Aspiration Hazard Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethanol 64-17-5		LC50: 12.0 - 16.0 mL/L (96 h static) Oncorhynchus mykiss LC50: 13400 - 15100 mg/L (96 h flow-through) Pimephales promelas LC50: > 100 mg/L (96 h static) Pimephales promelas	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	LC50: 9268 - 14221 mg/L (48 h) Daphnia magna EC50: 10800 mg/L (24 h) Daphnia magna EC50: 2 mg/L (48 h Static) Daphnia magna
Isopropyl alcohol 67-63-0	96h EC50: > 1000 mg/L (Desmodesmus subspicatus) 72h EC50: > 1000 mg/L (Desmodesmus subspicatus)	96h LC50: = 9640 mg/L (Pimephales promelas) 96h LC50: = 11130 mg/L (Pimephales promelas) 96h LC50: > 1400000 µg/L (Lepomis macrochirus)		48h EC50: 13299 mg/L
Glycerin 56-81-5		LC50: 51 - 57 mL/L (96 h static) Oncorhynchus mykiss		EC50: > 500 mg/L (24 h) Daphnia magna

Persistence and Degradability

No information available.

Bioaccumulation

Chemical Name	Log Pow
Ethanol 64-17-5	-0.32
Isopropyl alcohol 67-63-0	0.05

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Dispose of in accordance with all applicable federal, state, and local regulations.

Contaminated Packaging

Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.

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	No
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

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

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals. Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

Chemical Name	California Proposition 65
Ethanol 64-17-5	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island
Ethanol 64-17-5		X		
Isopropyl alcohol 67-63-0	X	X	X	X
Glycerin 56-81-5	X	X	X	X

