

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Isopropyl alcohol	67-63-0	30-60
Benzyl alcohol	100-51-6	10-30
Zinc acetate	557-34-6	1-5
Zinc lactate	16039-53-5	0.1-1
Panthenol	16485-10-2	0.1-1
Zinc gluconate	4468-02-4	0.1-1
Camphor	76-22-2	0.1-1
Menthol	89-78-1	0.1-1

4. FIRST AID MEASURES

General Advice	Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.
Eye Contact	In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
Skin Contact	Wash skin with soap and water.
Inhalation	Move victim to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Ingestion	Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.
Notes to Physician	Keep victim warm and quiet.
Protection of First-aiders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Flammable Properties	HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Containers may explode when heated. Many liquids are lighter than water.
Flash Point	84°F / 29°C
Suitable Extinguishing Media	Dry chemical, CO ₂ , water spray or regular foam. Water spray, fog or regular foam. Use water spray or fog; do not use straight streams. Move containers from fire area if you can do it without risk.
Unsuitable Extinguishing Media	CAUTION: All these products have a very low flash point. Use of water spray when fighting fire may be inefficient.
Hazardous Combustion Products	Carbon monoxide. Carbon dioxide (CO ₂).
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Specific Hazards Arising from the Chemical	Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard.
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	Health Hazard 1	Flammability 3	Stability 0	Physical and Chemical Hazards -
HMIS	Health Hazard 1*	Flammability 3	Physical Hazard 0	Personal Protection B

*Indicates a chronic health hazard.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk.
Environmental Precautions	Prevent entry into waterways, sewers, basements or confined areas.
Methods for Containment	A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Dike far ahead of liquid spill for later disposal.
Methods for Cleaning Up	Use clean non-sparking tools to collect absorbed material.
Other Information	Water spray may reduce vapor; but may not prevent ignition in closed spaces.

7. HANDLING AND STORAGE

Handling	Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Do not breathe vapors or spray mist.
Storage	Keep away from open flames, hot surfaces and sources of ignition. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

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

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

Eye/Face Protection
Skin and Body Protection
Respiratory Protection

If splashes are likely to occur, wear: Safety glasses with side-shields.
Protective gloves.

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 When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless.	Odor	Alcohol.
Odor Threshold	No information available	Physical State	Liquid
pH	6.2-6.5	Autoignition Temperature	No information available
Flash Point	84°F / 29°C	Boiling Point/Range	82°C / 182°F
Decomposition Temperature	No information available	Freezing Point	0°C / 32°F
Melting Point/Range	No information available	Explosion Limits	No information available
Flammability Limits in Air	No information available	Specific Gravity	No data available
Specific Gravity	0.93 - 0.97	Solubility	Soluble.
Water Solubility	Miscible with water	Vapor Pressure	>10 mm Hg
Evaporation Rate	~1 (water = 1)	VOC Content(%)	47.5
Vapor Density	>1 (air = 1)		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	Strong oxidizing agents. Acids. Chlorinated compounds.
Conditions to Avoid	Heat, flames and sparks.
Hazardous Decomposition Products	Carbon monoxide (CO). Carbon dioxide (CO ₂).
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information May be harmful by inhalation, ingestion, or skin absorption.

LD50 Oral VALUE >5000 mg/kg (rat) estimated
LD50 Dermal VALUE >2000 mg/kg (rabbit) estimated

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isopropyl alcohol	4396 mg/kg (Rat)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h
Zinc acetate	2510 mg/kg (Rat)		

Chronic Toxicity

Chronic Toxicity Prolonged skin contact may defat the skin and produce dermatitis.

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

Chemical Name	ACGIH	IARC	NTP	OSHA
Isopropyl alcohol		Group 3		X

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

Target Organ Effects Eyes. Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated. Ecotoxicity effects of component substances.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Isopropyl alcohol	EC50: >1000 mg/L Desmodesmus subspicatus 96 h EC50: >1000 mg/L Desmodesmus subspicatus 72 h	LC50: 9640 mg/L Pimephales promelas 96 h flow-through LC50: 11130 mg/L Pimephales promelas 96 h static LC50: >1400000 µg/L Lepomis macrochirus 96 h		EC50: 13299 mg/L Daphnia magna 48 h

Chemical Name	Log Pow
Isopropyl alcohol	0.05

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated Packaging	Dispose of in accordance with local regulations.
US EPA Waste Number	D001

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

Chemical Name	California Hazardous Waste
Isopropyl alcohol	Toxic Ignitable
Zinc acetate	Toxic
Zinc lactate	Toxic
Zinc gluconate	Toxic

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Flammable liquids, n.o.s.
Hazard Class	3
UN-No	UN1993
Packing Group	III
Description	UN1993, Flammable liquids, n.o.s. (Isopropyl alcohol), 3, PG III
Emergency Response Guide Number	128

TDG

Proper Shipping Name	Flammable liquid, n.o.s.
Hazard Class	3
UN-No	UN1993
Packing Group	III
Description	UN1993, FLAMMABLE LIQUID, N.O.S. (Isopropyl alcohol), 3, PG III

MEX

Proper Shipping Name	Flammable liquids, n.o.s.
Hazard Class	3
UN-No	UN1993
Packing Group	III
Description	UN1993, Flammable liquids, n.o.s. (Isopropyl alcohol), 3, III

ICAO

UN-No	UN1993
Proper Shipping Name	Flammable liquid, n.o.s.
Hazard Class	3
Packing Group	III
Description	UN1993, Flammable liquid, n.o.s. (Isopropyl alcohol), 3, PG III

IATA

UN-No	UN1993
Proper Shipping Name	Flammable liquid, n.o.s.
Hazard Class	3
Packing Group	III
ERG Code	3L
Description	UN1993, Flammable liquid, n.o.s. (Isopropyl alcohol), 3, PG III

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Zinc gluconate	4468-02-4	1	1.0
Zinc lactate	16039-53-5	1	1.0

SARA 311/312 Hazard Categories

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

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc gluconate		X		
Zinc lactate		X		

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**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Isopropyl alcohol	X				
Benzyl alcohol	X		X		
Zinc acetate	X	X	X		
Zinc lactate		X			
Zinc gluconate		X			

International Regulations**Mexico - Grade**

Serious risk, Grade 3

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

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B2 Flammable liquid
D2B Toxic materials



Chemical Name	NPRI
Isopropyl alcohol	X

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

Prepared By Product Stewardship
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General Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet