

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep cool

Precautionary Statements - 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 advice/attention
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a poison center or doctor/physician if you feel unwell
 IN CASE OF FIRE: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
 Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Isopropyl alcohol	67-63-0	70
DI Water	7732-18-5	30

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists: Get medical advice/attention.
Skin Contact	Wash off immediately with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse. Call a physician.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Call a poison center or doctor/physician if you feel unwell.
Ingestion	Immediately drink 1-2 glasses of milk or water. Get medical attention.

Most important symptoms and effects

Symptoms	May cause severe eye irritation with reddening and watering. Repeated exposure may cause skin dryness or cracking. May cause irritation to the mucous membranes and upper respiratory tract. Ingestion may cause irritation of the gastrointestinal tract, cramps, vomiting or diarrhea. Drowsiness.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Alcohol resistant foam. Carbon dioxide (CO₂). Dry chemical. Water spray (fog).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Vapors are heavier than air and may travel along ground to ignition sources and flash back.

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. Water may be ineffective on direct flame, but it can be used to flush spills from ignition or to disperse vapors.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal Precautions Remove all sources of ignition. Use personal protective equipment as required. Use non-sparking tools. Suppress vapors with water fog.

Methods and material for containment and cleaning up

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

Methods for Clean-Up Contain and collect with an inert absorbent and place into an appropriate container for disposal. Do not use combustible materials, such as saw dust.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on Safe Handling Wash thoroughly after handling. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Use only in well-ventilated areas. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Use spark-proof tools and explosion-proof equipment. Ground/bond container and receiving equipment. Take precautionary measures against static discharges. Avoid contact with skin and eyes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep locked up and out of reach of children.

Incompatible Materials Concentrated nitric and sulfuric acids. Oxidizers. Aldehydes. Halogens. Halogen compounds.

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: 500 ppm (vacated) STEL: 1225 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³

Appropriate engineering controls

Engineering Controls Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses.

Skin and Body Protection Chemical resistant protective gloves. Vinyl not recommended.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Characteristic
Appearance	Water clear liquid	Odor Threshold	Not determined
Color	Colorless		
Property	Values	Remarks • Method	
pH	7		
Melting Point/Freezing Point	-88.5 °C / -127.3 °F		
Boiling Point/Boiling Range	82 °C / 179 °F		
Flash Point	18 °C / 64 °F	Tag Closed Cup	
Evaporation Rate	2.88	(butyl acetate = 1)	
Flammability (Solid, Gas)	n/a-liquid		
Upper Flammability Limits	Not available		
Lower Flammability Limit	Not available		
Vapor Pressure	33 mm Hg		
Vapor Density	2.0	(Air=1)	
Specific Gravity	0.88	(1=Water)	
Water Solubility	Completely soluble		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Will not occur		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.**Conditions to Avoid**

Heat, flames and sparks. Ignition sources.

Incompatible Materials

Concentrated nitric and sulfuric acids. Oxidizers. Aldehydes. Halogens. Halogen compounds.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information****Eye Contact** Causes serious eye irritation.**Skin Contact** Avoid contact with skin.**Inhalation** Avoid breathing vapors or mists.**Ingestion** Do not taste or swallow.**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Isopropyl alcohol 67-63-0	= 4396 mg/kg (Rat)	= 12800 mg/kg (Rat) = 12870 mg/kg (Rabbit)	= 72.6 mg/L (Rat) 4 h
DI Water 7732-18-5	> 90 mL/kg (Rat)	-	-

Information on physical, chemical and toxicological effects**Symptoms** Please see section 4 of this SDS for symptoms.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Carcinogenicity** Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Isopropyl alcohol 67-63-0		Group 3		X

Legend**IARC (International Agency for Research on Cancer)**

Group 3 IARC components are "not classifiable as human carcinogens"

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

X - Present

STOT - single exposure May cause respiratory irritation. May cause drowsiness or dizziness.**Numerical measures of toxicity**

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Isopropyl alcohol 67-63-0	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50		13299: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Isopropyl alcohol 67-63-0	0.05

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Isopropyl alcohol 67-63-0	Toxic Ignitable

14. TRANSPORT INFORMATION

Note

The shipping description is specific to the container and mode of shipment.
NOTE: packages with inner packagings not over 5 liter/5 kg may be reclassified as a Limited Quantity. Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances

DOT

UNID No UN1219
Proper Shipping Name Isopropyl alcohol solution
Hazard Class 3
Packing Group II

IATA

UN/ID No UN1219
Proper Shipping Name Isopropyl alcohol solution
Hazard Class 3
Packing Group II

IMDG

UN/ID No UN1219
Proper Shipping Name Isopropyl alcohol solution
Hazard Class 3
Packing Group II

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Isopropyl alcohol	Present	X		Present		Present	X	Present	X	X
DI Water	Present	X		Present			X	Present	X	X

Legend:

- TSCA - 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 Chemical Substances/European 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*

US Federal Regulations

SARA 311/312 Hazard Categories

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

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Isopropyl alcohol - 67-63-0	67-63-0	70	1.0

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Isopropyl alcohol 67-63-0	X	X	X
DI Water 7732-18-5			X

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	1	3	0	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	1	3	0	B

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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