

Pictogram



Signal Word

Danger

Hazard statements

Highly flammable liquid and vapor.
Causes serious eye irritation.

Precautionary statements

Prevention: Do not eat, drink, or smoke when using this product. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use explosion-proof electrical/ventilating/lighting/equipment. Take precautionary measures against the static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection.

Response: If exposed or concerned: Call a poison center/doctor. Call a poison center/doctor if you feel unwell.

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): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of water. If skin irritation occurs: Get medical attention. Wash contaminated clothing before re-use.

Fire: In case of fire, use water spray or fog, carbon dioxide, dry chemical powder, or alcohol resistant foam to extinguish.

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

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Ethanol	Ethyl alcohol	64-17-5	95.0%
2-Propanol	Isopropyl alcohol	67-63-0	5.0%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	If symptoms are experienced, remove source of contamination or move victim to fresh air. If breathing is difficult, get medical attention.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If irritation is experienced, flush with water. Get medical attention if irritation develops and persists, get medical attention.
In case of eye contact	Immediately flush eyes with water for at least 15 minutes while holding eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, get medical attention.
If swallowed	Rinse mouth. Do not induce vomiting. If the material is swallowed, get medical attention or advice.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Never give anything by mouth to an unconscious person. If exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Water fog, alcohol-resistant foam, dry chemical powder, Carbon dioxide (CO ₂).
Unsuitable extinguishing media	For this substance/mixture, no limitations of extinguishing agents are given.

5.2 Specific hazards arising from the substance or mixture

Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.
Hazardous Combustion Products: Carbon oxides.

5.3 Special protective equipment and precautions for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Flash Point 13 °C (55.4 °F)

Autoignition Temperature 363 °C

Explosion limits

Upper 19.00%

Lower 3.30%

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	3	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For large spills wear gloves, Tyvek suits, safety glasses, and appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Flammable Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. If container is not properly cooled, it can rupture in the heat of a fire.

6.2 Environmental precautions

Prevent discharge to open bodies of water, municipal sewers, and watercourses.

6.3 Methods and materials for containment and cleaning up

Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite, or diatomaceous earth. Ventilate area of leak or spill. Use spark-proof tools to sweep or scrape up and containerize in approved chemical waste container. Wash spill area with water.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements. See Section 13 for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Keep away from heat, sparks and flame. Use only with adequate ventilation. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Handle empty containers with care because residual vapors are flammable.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Incompatibilities

This product reacts with strong acids, strong bases, and oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

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

Component	Type	Value	
Ethyl alcohol	(Vacated) TWA	1000 ppm	1900 mg/m ³
Isopropyl alcohol	(Vacated) TWA	400 ppm	980 mg/m ³
	(Vacated) STEL	500 ppm	1225 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Ethyl alcohol	STEL	1000 ppm
Isopropyl alcohol	TWA	200 ppm
	STEL	400 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value	
Ethyl alcohol	IDLH	3300 ppm	
	TWA	1000 ppm	1900 mg/m ³
Isopropyl alcohol	IDLH	2000 ppm	
	TWA	400 ppm	980 mg/m ³
	STEL	500 ppm	1225 mg/m ³

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal protective equipment

Eye/face protection

Safety glasses with side shields are recommended as minimum protection in industrial settings.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, use appropriate respirator protection. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Control of environmental exposure

Prevent discharge to open bodies of water, municipal sewers, and watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Alcohol-like
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-114.1 °C (-173.38 °F)
Boiling Point/Range	78.5 °C (173.3 °F)
Evaporation Rate	No information available
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	19.00%
Lower	3.30%
Vapor Pressure	57.3 hPa at 20 °C
Vapor Density	1.6

Density	No information available
Solubility	Soluble in water
Partition coefficient; n-octanol/water	-0.32
Autoignition Temp	363 °C
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	C2H6O
Molecular Weight	46.07 g/mol
VOC Content(%)	No information available
Oxidizing properties	Not oxidizing

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts violently with strong oxidizers: (increased) risk of fire/explosion.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

This product reacts with strong acids, strong bases, and oxidizing agents.

10.6 Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl alcohol	10470 mg/kg (Rat) 3450 mg/kg (Mouse)	-	117-125 mg/L 4h (Rat) 20000 ppm/10H (Rat)

Isopropyl alcohol	5045 mg/kg (Rat) 3600 mg/kg (Mouse)	12800 mg/kg (Rat)	72.6 mg/L 4h (Rat)
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Skin corrosion/irritation

May cause irritation, cracking, flaking, and defatting of skin on prolonged contact.

Serious eye damage/eye irritation

Liquid and vapor may cause irritation. Splashes may cause temporary pain and blurred vision.

Respiratory or skin sensitization

May cause irritation to the mucous membranes of the upper respiratory tract. Exposure over 1000 ppm may cause headache, drowsiness, lassitude, loss of appetite, inability to concentrate, throat irritation.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Ethyl alcohol	64-17-5	Not listed	Not listed	Not listed	Not listed	Not listed
Isopropyl alcohol	67-63-0	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

No information available.

Specific target organ toxicity - repeated exposure

No information available.

Reproductive toxicity

No information available.

Chronic effects

Prolonged skin contact causes drying and cracking of skin.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Ethanol	LC50	Pimephales promelas	15,300 mg/L, 96h, flow-through
	LC50	Ceriodaphnia dubia	5,012 mg/L, 48h, static
	EC50	Chlorella vulgaris	275 mg/L, 72h, static

Ethanol	IC50	Activated sludge	> 1,000 mg/L, 3h, static
	NOEC	Danio rerio	250 mg/L 120h, semi-static
	NOEC	Daphnia magna	9.6 mg/L, 9d, semi-static
2-Propanol	LC50	Pimephales promelas	9,640 mg/L, 96h, flow-through
	EC50	Daphnia magna	13,299 mg/L, 48h
	IC50	Desmodesmus subspicatus	> 1,000 mg/L, 72h
	EC50	Pseudomonas putida	1,050 mg/L, 16h

12.2 Persistence and degradability

The relevant substances of the mixture are readily biodegradable.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN-no	UN1987
Proper Shipping Name	Alcohols, n.o.s.
Hazard Class	3
Packing Group	II

IMDG

UN-no	UN1987
Proper Shipping Name	Alcohols, n.o.s.
Hazard Class	3

Packing Group II

IATA

UN-no UN1987
Proper Shipping Name Alcohols, n.o.s.
Hazard Class 3
Packing Group II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not applicable.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous
Fire Hazard, Acute Health Hazard, Chronic Health Hazard.

SARA 313 (TRI reporting)
Listed, Isopropyl alcohol (CAS #67-63-0).

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
Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Listed, Ethyl alcohol (CAS #64-17-5).
Listed, Isopropyl alcohol (CAS #67-63-0).

US state regulations

US. Massachusetts RTK - Substance List

Listed, Ethyl alcohol (CAS #64-17-5).
Listed, Isopropyl alcohol (CAS #67-63-0).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Ethyl alcohol (CAS #64-17-5).
Listed, Isopropyl alcohol (CAS #67-63-0).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Ethyl alcohol (CAS #64-17-5).
Listed, Isopropyl alcohol (CAS #67-63-0).

California Proposition 65

Listed, Ethyl alcohol (CAS #64-17-5).

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on 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 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.