

Section 1. Product and Company Identification

Product Name n-Propanol
CAS Number 71-23-8

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CHEMTEL
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Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

Hazard classification

Physical hazards

Flammable liquids: Category 3

Health hazards

Acute toxicity (Oral): Category 4

Serious eye damage/eye irritation: Category 2A

Specific target organ toxicity - single exposure: Category 3

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard statement

Flammable liquid and vapor.

Harmful if swallowed.

Causes serious eye irritation.

May cause respiratory irritation.

May cause drowsiness or dizziness.

Precautionary Statement

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. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

Response: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. 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. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction.

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

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

Section 3. Composition / Information on Ingredients

Common Name n-Propanol
Synonym(s) Propyl Alcohol
Formula C_3H_8O
CAS Number 71-23-8

COMPONENT	CAS NUMBER	CONCENTRATION
n-Propanol	71-23-8	99 – 100%

Section 4. First Aid Measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.

Inhalation: Move to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact: Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.
Most important symptoms/effects, acute and delayed

Symptoms: Harmful if swallowed. Irritating to eyes, respiratory system and skin. Narcotic effect. Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.



Section 5. Firefighting Measures

General fire hazards: Flammable liquid and vapor.

Extinguishing media

Suitable extinguishing media: Water spray, foam, dry powder, or carbon dioxide.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical: Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Heat may cause the containers to explode.

Special protective equipment and precautions for firefighters

Special firefighting procedures: Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Special protective equipment for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. See Section 8 of the MSDS for Personal Protective Equipment.

Methods and material for containment and cleaning up: Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use only non-sparking tools. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

Environmental precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

Section 7. Handling and Storage

Precautions for safe handling: DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective

gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

Section 8. Exposure Controls / Personal Protection

Control parameters

Occupational exposure limits

Chemical Identity	Type	Exposure Limit Values	Source
Propyl Alcohol	TWA	100 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	200 ppm 500 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	250 ppm 625 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	200 ppm 500 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	200 ppm 500 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	250 ppm 625 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	250 ppm 625 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA PEL	200 ppm 500 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)

Appropriate engineering controls: No data available.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection: Wear protective gloves.

Other: Wear suitable protective clothing.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Section 9. Physical and Chemical Properties

Appearance

Physical state: Liquid

Form: Liquid

Color: Colorless

Odor: Slight odor of alcohol

Odor threshold: No data available.

pH: No data available.

Melting point/freezing point: -127°C

Initial boiling point and boiling range: 97°C

Flash Point: 23°C (Closed Cup)

Evaporation rate: 1.0 (butyl acetate=1)

Flammability (solid, gas): Class IB Flammable Liquid

Upper/lower limit on flammability or explosive limits

Flammability limit - upper: 13.5% (V)

Flammability limit - lower: 2.1% (V)

Explosive limit - upper: No data available.

Explosive limit - lower: No data available.

Vapor pressure: 2.80 kPa (25 °C)

Vapor density: 2.1 AIR=1

Relative density: 0.80 (20 °C)

Solubility(ies)

Solubility in water: Miscible with water.

Solubility (other): No data available.

Partition coefficient (n-octanol/water): 0.25

Auto-ignition temperature: 413°C

Decomposition temperature: No data available.

Viscosity: No data available.

Other information

Molecular weight: 60.1 g/mol (C_3H_8O)

Section 10. Stability and Reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Material is stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerization does not occur.

Conditions to avoid: Heat, sparks, flames. Sunlight.

Incompatible materials: Strong oxidizing agents. Acids.

Hazardous decomposition products: Thermal decomposition may release oxides of carbon.

Section 11. Toxicological Information

Information on likely routes of exposure

Ingestion: Harmful if swallowed.

Inhalation: May cause irritation to the respiratory system. May cause drowsiness or dizziness.

Skin contact: Causes mild skin irritation.

Eye contact: Causes serious eye irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: LD 50 (Rat): 1,870 mg/kg

Dermal

Product: No data available.

Inhalation

Product: No data available.

Repeated dose toxicity

Product: No data available.

Skin corrosion/irritation

Product: Causes mild skin irritation.

Serious eye damage/eye irritation

Product: Causes serious eye irritation.

Respiratory or skin sensitization

Product: Not a skin sensitizer.

Carcinogenicity

Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: No carcinogenic components identified

US National Toxicology Program (NTP) Report on Carcinogens: No carcinogenic components identified

US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): No carcinogenic components identified

Germ cell mutagenicity

In vitro

Product: No mutagenic components identified

In vivo

Product: No mutagenic components identified

Reproductive toxicity

Product: No components toxic to reproduction

Specific target organ toxicity - single exposure

Product: Inhalation - vapor: Narcotic effect. Respiratory tract irritation.

Specific target organ toxicity - Repeated exposure

Product: No data available.

Aspiration hazard

Product: May be harmful if swallowed and enters airways.

Other effects: None known.

Section 12. Ecological Information

Ecotoxicity

Acute hazards to the aquatic environment

Fish

Product: No data available.

Specified substance(s): Propyl Alcohol

LC50 (Bleak (*Alburnus alburnus*), 96h): 3,000 - 4,000 mg/L Mortality

LC50 (Fathead minnow (*Pimephales promelas*), 96h): 4,100 - 4,880 mg/L Mortality

Aquatic invertebrates

Product: No data available.

Specified substances: Propyl Alcohol

EC50 (Water flea (*Daphnia magna*), 48h): 3,339 - 3,977 mg/l Intoxication

LC50 (Scud (*Gammarus pulex*), 48h): 1,000 mg/l Mortality

LC50 (Leech (*Erpobdella octoculata*), 48h): 1,400 mg/l Mortality

LC50 (Water flea (*Daphnia magna*), 48h): 6,300 mg/l Mortality

LC50 (Great pond snail (*Lymnaea stagnalis*), 48h): 6,500 mg/l Mortality

Chronic hazards to the aquatic environment

Fish

Product: No data available.



Aquatic invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and degradability

Biodegradation

Product: There are no data on the degradability of this product.

BOD/COD ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration factor (BCF)

Product: No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow)

Product: Log Kow: 0.25

Mobility in soil: The product is water soluble and may spread in water systems.

Other adverse effects: The product components are 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

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT

UN number: UN1274

UN proper shipping name: n-Propanol

Transport hazard class(es)

Class(es): 3

Label(s): 3

Packing group: III

Marine Pollutant: No

IMDG

UN number: UN1274

UN proper shipping name: n-Propanol

Transport hazard class(es)

Class(es): 3

Label(s): 3



EmS No.: F-E, S-D
Packing group: III
Marine Pollutant: No

IATA

UN number: UN1274
Proper Shipping Name: n-Propanol
Transport hazard class(es)
Class(es): 3
Label(s): 3
Marine Pollutant: No
Packing group: III

Section 15. Regulatory Information

US Federal Regulations

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

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4)

PROPYL ALCOHOL - Reportable quantity: 100 lbs.

Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories: Acute (Immediate); Fire

SARA 302 Extremely hazardous substance: None present or none present in regulated quantities.

SARA 304 Emergency release notification

Chemical identity: Propyl Alcohol

RQ: 100 lbs.

SARA 311/312 Hazardous chemical

Chemical identity: Propyl Alcohol

Threshold Planning Quantity: 500 lbs

SARA 313 (TRI reporting): None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): None present or none present in regulated quantities.

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

None present or none present in regulated quantities.



US State Regulations

US California Proposition 65: No ingredient regulated by CA Prop 65 present.

US New Jersey Worker and Community Right-to-Know Act: Listed

US Massachusetts RTK - Substance List: Listed

US Pennsylvania RTK - Hazardous Substances: Listed

US Rhode Island RTK: No ingredient regulated by RI Right-to-Know Law present.

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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