



Safety Data Sheet

n-Propanol

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: n-Propanol

Synonyms/Generic Names: 1-Propanol, n-Propyl alcohol, Propyl alcohol, 1-Hydroxypropane, Ethyl carbinol, Propan-1-ol

Product Number: CP-24135

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: ChemPure Brand Chemicals
39103 Warren Road
Westland, MI 48185

For More Information Call: 734-729-1805 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC – 800-424-9300 or 703-527-3887 (24 Hours/Day, 7Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Flammable liquid and vapor. Risk of serious damage to eyes. Vapors may cause drowsiness and dizziness. May cause skin and respiratory tract irritation. Aspiration hazard if swallowed – can enter lungs and cause damage.

Target Organs: Eyes, lungs, skin, blood and central nervous system.

Signal Words: Danger

Pictograms:



GHS Classification:

Flammable liquids	Category 3
Serious eye damage	Category 1
Specific target organ toxicity – single exposure	Category 3 (central nervous system)

GHS Label Elements, including precautionary statements:

Signal Word: Danger

Hazard Statements:

H226	Flammable liquid and vapor
H318	Causes serious eye damage
H336	May cause drowsiness or dizziness

Precautionary Statements:

P210	Keep away from heat/sparks/open flames/ hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas mist/ vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ eye protection/ face protection.

Response:

P303 + P361 + P353	IF ON SKIN (or hair) - Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED – Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES – Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/physician if you feel sick.
P370 + P378	In case of fire: Use carbon dioxide, dry chemical or foam for extinction.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Potential Health Effects

Eyes	Risk of serious damage to eyes.
Inhalation	Inhalation may cause central nervous system effects. May cause irritation of respiratory tract. May be harmful if inhaled.
Skin	May cause irritation. May be harmful in contact with skin.
Ingestion	Aspiration hazard. May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic Effects	Tumorigenic effects have been reported in experimental animals. Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse liver effects.
Aggravated Medical Conditions	Central nervous system disorders. Gastrointestinal tract. Pre-existing eye disorders. Skin disorder.

NFPA Ratings

Health	1
Flammability	3
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	3
Reactivity	0
Personal	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
n-propanol	>99	71-23-8	200-746-9	CH ₃ CH ₂ CH ₂ OH	60.10 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Get medical attention if symptoms occur.
Skin	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Ingestion	Do not induce vomiting. Obtain medical attention.
Note to Physician	Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Alcohol-resistant foam, Carbon dioxide (CO ₂), Dry chemical. Use water spray to cool unopened containers. (Water spray jet).
Specific hazards during fire fighting	Water may be ineffective. The product will float on water and can be reignited on surface water.
Hazardous combustion products	No hazardous combustion products are known.
Further Information	Flammable liquid and vapor.
Special protective equipment for firefighters	Wear an approved positive pressure self-regulated breathing apparatus in addition to standard firefighting gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear appropriate personal protective equipment. Remove all sources of ignition. Take measures against static discharges. Avoid contact with skin, eyes and clothing.
Environmental precautions	Should not be released into the environment. Any release to the environment may require reporting to federal/national or local agencies.
Methods and materials for containment and cleaning up	Remove all sources of ignition. Soak up with inert absorbent material such as sand, earth diatomaceous earth, or vermiculite. Take precautionary measures against static discharges. Ventilate

7. HANDLING AND STORAGE

Precautions for safe handling

Wear personal protective equipment. Keep away from open flames. Hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not breathe vapors or spray mist. Do not get in eyes, on skin or on clothing.

Conditions for safe storage, including any incompatibilities

Store in a tightly closed container. Store in a dry, cool and ventilated area. Keep away from heat and sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Controls:

Component	Exposure Limits /Permissible concentration	Value Type (Form of exposure)	Basis
n-Propanol	100 ppm	TWA	ACGIH
	200 ppm	TWA	NIOSH REL
	500 mg/m ³		
	250 ppm	ST	NIOSH REL
	625 mg/m ³		
	200 ppm	TWA	OSHA Z-1
	500 mg/m ³		
	250 ppm	STEL	OSHA P0
	625 mg/m ³		
	200 ppm	TWA	OSHA P0
	500 mg/m ³		

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

Engineering measures: Ensure adequate ventilation. Use explosion-proof electrical/ventilating/equipment.

Personal Protection

Eyes	Wear chemical safety glasses and/or full-face shield where dust formation is possible.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear rubber gloves and protective clothes with lab coat or coveralls/apron.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Liquid, clear
Odor	Alcohol like
Odor threshold	2.6 ppm
pH	7 at 200 g/L, H ₂ O at 20°C

Melting point/freezing point	-127°C (-197°F)
Initial boiling point and boiling range	97°C (207°F) @ 760 mmHg
Flash point	23°C (73 °F) Tag close cup
Density	0.803 g/mL
Evaporation rate (BuAc = 1)	1.3
Flammability (solid, gas)	Flammable
Upper/lower flammability or explosive limit	13.7% upper / 2.1% lower
Vapor pressure	14.3 mm Hg or 19.0 mbar (68°F / 20°C)
Vapor density	2.1 (air=1)
Relative density	2.1
Viscosity	2.256 cP (20°C)
Refractive Index	1.3862 (20°C)
Solubility (ies)	Soluble in water
Partition coefficient: n-octanol/water	Log Pow : 0.25 – 0.34 (calculated)
Auto-ignition temperature	413°C (775 °F)
Decomposition temperature	Not Available
Molecular Weight	60.09
Molecular Formula	C ₃ H ₈ O

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	Vapors may form explosive mixture with air.
Conditions to Avoid	Heat, flames and sparks. Extremes of temperatures and direct sunlight.
Incompatible Materials	Strong oxidizing agents, strong acids.
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂)

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	LC50 – Rabbit – 4000 mg/Kg
Eyes	Not Available
Respiratory	LC50 Inhalation -rat- 13548 mg/Kg
Ingestion	LD50 Oral – rat – 1870 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Redness, irritation
Eyes	Redness, severe irritation
Respiratory	Irritation of mucous membranes, coughing, dyspnea, drowsiness.
Ingestion	Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain

Carcinogenicity	There are no known carcinogenic chemicals in this product.
Chronic Toxicity	Not Available
Teratogenicity	Teratogenic effects have occurred in experimental animals.
Mutagenicity	Bacterial mutagenicity: Ames test is negative.
Reproductive Effects	Experiments have shown reproductive toxicity effects on lab animals.
Developmental Effects	Developmental effects have occurred in experimental animals.
Embryotoxicity	May cause harm; developmental effects have occurred in experimental animals
Specific Target Organ Toxicity	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	LC50 (Pimephales promelas): >804 mg/L, exposure for 96 hours
Aquatic Invertebrate	LC50 (daphnid): >804 mg/L, exposure for 96 hours. LC50 (snail) : >804 mg/L, exposure for 96 hours.
Terrestrial	Not Available
Persistence and Degradability	Concentration 3 mg/L, biodegrades 75%, exposure 20 days
BOD -5	1,430 mg/g
BOD-20	<2,000 mg/L
COD	71 mg/g
ThOD	2,400,000 mg/L
Bioaccumulative Potential	Log Pow: 0.25 (experimental)
Mobility in Soil	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORT INFORMATION

US DOT	UN1274, N-Propanol, Hazard Class 3, Packaging Group II
TDG	UN1274, N-Propanol, Hazard Class 3, Packaging Group II
IMDG	UN1274, N-Propanol, Hazard Class 3, Packaging Group II
Marine Pollutant	No
IATA/ICAO	UN1274, N-Propanol, Hazard Class 3, Packaging Group II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard, Fire Hazard
SARA 312	Acute Health Hazard, Fire Hazard
SARA 313	Not Listed
WHMIS Canada	B2 Flammable, D28 Toxic materials

16. OTHER INFORMATION

Revision	Date
Revision 1	07-01-2011
Revision 2	08/06/2013
Revision 3	11/19/2021

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