

## n-Propanol

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**SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

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**Trade name** n-Propanol  
**Synonyms** 1-Propanol, Hydroxypropane, 1-Propyl alcohol, Ethyl carbinol, n-Propan-1-ol, Propylic alcohol.  
**Use** Industrial use, Intermediate, Process/Extraction Solvent, Raw material for chemical processes, Raw material for industry, Solvent  
**Company Address** The Chemical Supply  
9595 Six Pine Dr., Ste 8210  
The Woodlands, TX 77380  
**Telephone** CHEMTREC North America Transportation Emergency (24-hr) (800) 424-9300  
CHEMTREC World Wide (703) 527-3887

**E-mail address** info@thechemicalsupply.com

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**SECTION 2 HAZARDS IDENTIFICATION**

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<b>OSHA/GHS Hazards</b>	Flammable liquids	Category 2
	Serious eye damage	Category 1
	Specific target organ toxicity - single exposure	Category 3 (Narcotic effects)

**LABEL ELEMENTS****Hazard symbols**

**Signal word** Danger

**Hazard statements** H225 Highly flammable liquid and vapour.  
H318 Causes serious eye damage.  
H336 May cause drowsiness or dizziness.

**Precautionary statements**

**Prevention** P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

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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.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P271 Use only outdoors or in a well-ventilated area.

**Response** P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.  
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/doctor.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312 Call a POISON CENTER/doctor if you feel unwell.

**Storage** P403 + P405 + P235 Store locked up in a well-ventilated place. Keep cool.

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### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

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<u>Components</u>	<u>CAS-No.</u>	<u>Weight percent</u>
n-Propanol	71-23-8	99.9

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

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### SECTION 4 FIRST AID MEASURES

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**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.

**Inhalation** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of shortness of breath, give oxygen. Call a physician immediately.

**Ingestion** If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

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### SECTION 5 FIREFIGHTING MEASURES

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#### FLAMMABLE PROPERTIES

**Fire/explosion** Vapours may form explosive mixture with air. Flash back possible over considerable distance. Use water spray to disperse the vapors. NFPA Class 1C flammable liquid.

**Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Protective equipment and precautions for firefighters** Wear self-contained breathing apparatus and protective suit. Keep containers and surroundings cool with water spray.

**Further information** Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### SECTION 6 ACCIDENTAL RELEASE MEASURES

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**Methods and materials for containment and cleaning up** Evacuate personnel to safe areas. Remove all sources of ignition. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

### SECTION 7 HANDLING AND STORAGE

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**Safe handling advice** Ensure all equipment is electrically grounded before beginning transfer operations. Keep away from heat and sources of ignition. Use only with adequate ventilation.

**Storage/Transport pressure** Ambient

**Load/Unload temperature** Ambient

### SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### ENGINEERING MEASURES

Air contaminant levels should be controlled below the PEL or TLV for this product (see Exposure Guidelines). Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment.

#### PERSONAL PROTECTIVE EQUIPMENT

**Eyes** Chemical resistant goggles must be worn., Face-shield

**Skin** Wear suitable protective clothing, gloves and eye/face protection.

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**Inhalation** Respiratory protection is normally not required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Use NIOSH approved respiratory protection.

### EXPOSURE GUIDELINES

<u>Components</u>	<u>Exposure limit(s)</u>
<b>n-Propanol</b>	OSHA PEL (Permissible Exposure Limit) 200 ppm 500 mg/m <sup>3</sup> ACGIH TLV (8-hour) 100 ppm

PEL= Permissible Exposure Limits  
TLV= Threshold Limit Value  
EL= Excursion Limit

TWA= Time Weighted Average (8 hr.)  
STEL= Short Term Exposure Limit (15 min.)  
WEEL= Workplace Environmental Exposure Level

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## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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**Appearance** liquid;

**Colour** Clear, colorless

**Form** liquid

**Odour** alcohol-like

**Odour Threshold** No data available

**Flash point** 24 °C, 75 °F;

**Flammability** Upper explosion limit: 13.5 %(V)  
Lower explosion limit: 2.1 %(V)

**Boiling point/boiling range** 97 °C, 207 F;

**Melting point/range** -127.5 °C, -197.5 F;

**Auto-ignition temperature** 400 °C, 752 F;

**Decomposition temperature** No data available

**Flammability (solid, gas)** No data available

**Vapour pressure** 28.2 hPa @ 25 °C, 77 °F;

**Vapour density** 2.1

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<b>Density</b>	0.804 g/cm <sup>3</sup> @ 20 °C, 68 °F;
<b>Specific gravity</b>	No data available
<b>Water solubility</b>	completely miscible
<b>Viscosity</b>	No data available
<b>Viscosity, dynamic</b>	2.3 mPa.s @ 20 °C, 68 °F;
<b>pH</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	log Pow: 0.2; @ 25 °C, 77 °F;
<b>Volatile organic compounds (VOC) content</b>	100 %

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## SECTION 10 STABILITY AND REACTIVITY

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<b>Reactivity</b>	No decomposition if stored and applied as directed.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks. Avoid temperatures above 35°C, direct sunlight and contact with sources of heat.
<b>Hazardous decomposition products</b>	Combustion products include carbon dioxide, carbon monoxide and possibly other unidentified organic compounds.
<b>Materials to avoid</b>	Can react with strong oxidizers, inorganic acids, and halogens.
<b>Hazardous polymerisation</b>	Vapours may form explosive mixture with air.

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## SECTION 11 TOXICOLOGICAL INFORMATION

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<b>Acute dermal toxicity</b>	LD50 Rabbit: > 2,000 mg/kg(literature value)
<b>Acute inhalation toxicity</b>	LC50 Rat (4 hours): > 20 mg/l (literature value)
<b>Acute oral toxicity</b>	LD50 Rat: > 2,000 mg/kg

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	(literature value)
<b>Skin corrosion/irritation</b>	(Rabbit): Draize Test Not irritating, (literature value)
<b>Serious eye damage/eye irritation</b>	(Rabbit): Draize Test Risk of serious damage to eyes., (literature value)
<b>Respiratory or skin sensitisation</b>	Guinea pig: not sensitizing; Maximisation Test (literature value)
<b>Germ cell mutagenicity</b>	<b>Genotoxicity in vitro:</b> Type: Ames test System: Salmonella typhimurium; with and without metabolic activation Result: In vitro tests did not show mutagenic effects (literature value)  <b>Genotoxicity in vivo:</b> No data available  <b>Assessment Mutagenicity:</b> Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	<b>Reproductive toxicity:</b> No data available  <b>Assessment Reproductive toxicity:</b> No data available  <b>Teratogenicity:</b> No data available  <b>Assessment teratogenicity:</b> No data available
<b>STOT - single exposure</b>	The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
<b>STOT - repeated exposure</b>	No data available
<b>Aspiration toxicity</b>	No data available
<b>Carcinogenicity</b>	<b>Assessment carcinogenicity:</b> Contains no ingredient listed as a carcinogen

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### SECTION 12 ECOLOGICAL INFORMATION

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<b>Toxicity to fish</b>	LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; flow-through test (literature value)
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) 48 hours: > 100 mg/l; static test (literature value)
<b>Toxicity to algae</b>	EC50 (Pseudokirchneriella subcapitata (green algae)) 48 hours: > 100 mg/l (literature value)
<b>Chronic toxicity to aquatic invertebrates</b>	NOEC (Daphnia magna (Water flea)) 21 d: > 100 mg/l; semi-static test; OECD Test Guideline 211 (literature value)
<b>Biodegradation</b>	Readily biodegradable.  OECD Test Guideline 301D (15 d): > 60 % (literature value)
<b>Bioaccumulative potential</b>	No bioaccumulation is to be expected (log Pow <= 4).
<b>Mobility in soil</b>	No data available
<b>Other adverse effects</b>	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).;

### SECTION 13 DISPOSAL CONSIDERATIONS

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<b>Waste Code</b>	D001 - Ignitability (RQ 100 LB). This product has the RCRA characteristic of ignitability. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification.
<b>Disposal methods</b>	Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil. Land disposal of this product is restricted.
<b>Empty containers.</b>	Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

### SECTION 14 TRANSPORT INFORMATION

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**DOT** UN 1274, n-Propanol, 3, III

**IATA** UN 1274, n-Propanol, 3, III

**IMDG** UN 1274, n-Propanol, 3, III

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**Remarks** No data available

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## SECTION 15 REGULATORY INFORMATION

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### U.S. FEDERAL REGULATIONS

#### TSCA Inventory Listing

Components

1-Propanol

CAS-No.

71-23-8

#### SARA 302 Status

Components

CAS-No.

Weight percent

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 311/312 Classification

"Fire hazard", "Immediate (acute) health hazard"

#### SARA 313 Chemical

Components

CAS-No.

Weight percent

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components

none

Reportable Quantity

Weight percent

### INTERNATIONAL REGULATIONS

#### WHMIS Classification

Flammable liquids	Category 2
Serious eye damage	Category 1
Specific target organ toxicity - single exposure	Category 3 (Narcotic effects)



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### European Union

Classification according to Regulation (EU) 1272/2008.

Flammable liquids, Category 2

Serious eye damage, Category 1

Specific target organ toxicity - single exposure, Category 3 (Narcotic effects)

<b>Australia. Inventory of Chemical Substances (AICS)</b>	Listed
<b>Japan. Inventory of Existing and New Chemical Substances (ENCS)</b>	Listed
<b>Japan. ISHL - Inventory of Chemical Substances</b>	Listed
<b>Canada. Domestic Substances List (DSL) Inventory</b>	Listed
<b>Canada. Non-Domestic Substance Listing (NDSL)</b>	Not listed
<b>Philippines. Inventory of Chemicals / Chemical Substances (PICCS)</b>	Listed
<b>Korea. Existing Chemicals Inventory (KECI)</b>	Listed
<b>China. Inventory of Existing Chemical Substances (IECSC)</b>	Listed
<b>Mexico</b>	Listed
<b>New Zealand. Inventory of Chemical Substances</b>	Listed
<b>Switzerland</b>	Listed
<b>Taiwan. National Existing Chemical Inventory (NECI)</b>	Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

### STATE REGULATIONS

California Prop. 65

Components

none

CAS-No.

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## SECTION 16 OTHER INFORMATION

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### HAZARD RATINGS

	<u>Health</u>	<u>Flammability</u>	<u>Physical Hazard/ Instability</u>
<b>HMIS®</b>	3	3	0
<b>NFPA</b>	3	3	0

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