

**1-Propanol****24135-1L**

Version 1.3

Revision Date 05/14/2024

Print Date 11/19/2024

**SECTION 1. IDENTIFICATION**

Product name : 1-Propanol

Number : 000000020245

Product Use Description : Laboratory chemicals, Industrial use

Manufacturer or supplier's details : Honeywell International Inc.  
115 Tabor Road  
Morris Plains, NJ 07950-2546

For more information call : 1-800-368-0050  
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**  
: **Transportation (CHEMTREC): 1-800-424-9300 or**  
: **+1-703-527-3887**  
:  
: (24 hours/day, 7 days/week)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : liquid

Color : colourless

Odor : alcohol-like

**Classification of the substance or mixture**

Classification of the substance or mixture : Flammable liquids, Category 2  
Serious eye damage, Category 1  
Specific target organ toxicity - single exposure, Category 3,  
Central nervous system

**GHS Label elements, including precautionary statements**

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Symbol(s)

:



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapour.  
Causes serious eye damage.  
May cause drowsiness or dizziness.

Precautionary statements

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

**Response:**

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.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/ doctor.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

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

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

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**Carcinogenicity**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Formula : C<sub>3</sub>H<sub>8</sub>O

Chemical nature : Substance

| Chemical name | CAS-No. | Concentration |
|---------------|---------|---------------|
| Propan-1-ol   | 71-23-8 | 100.00 %      |

**SECTION 4. FIRST AID MEASURES**

General advice : First aider needs to protect himself. Move out of dangerous area. Immediately take off contaminated clothing and rinse body with plenty of water. Victim to lie down in the recovery position, cover and keep him warm.

Inhalation : In case of accident by inhalation: remove casualty to fresh air and keep at rest. If symptoms persist, call a physician.

Skin contact : After contact with skin, wash immediately with plenty of water.

Eye contact : Protect unharmed eye. Irrigate eyes for at least 15 minutes with copious quantities of water, keeping eyelids apart and away from eyeballs during irrigation. Call a physician immediately.

Ingestion : When swallowed, allow water to be drunk. Do NOT induce vomiting. Call a physician immediately.

**Notes to physician**

Most important symptoms/effects, acute and : No information available.

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delayed  
Indication of immediate : Treat symptomatically.  
medical attention and  
special treatment needed, if  
necessary

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder  
Alcohol-resistant foam
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during firefighting : Flammable.  
Vapours may form explosive mixtures with air.  
Vapours are heavier than air and may spread along floors.  
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.  
In case of fire hazardous decomposition products may be produced such as:  
Carbon oxides
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.  
Wear personal protective equipment. Unprotected persons must be kept away.  
Ensure adequate ventilation.  
Remove all sources of ignition.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.  
Prevent further leakage or spillage if safe to do so.

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Clean contaminated floors and objects thoroughly while observing environmental regulations.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Ventilate the area.  
Do not use sparking tools.  
Use explosion-proof equipment.  
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

**SECTION 7. HANDLING AND STORAGE****Handling**

Precautions for safe handling : Wear personal protective equipment.  
Use only in well-ventilated areas.

Advice on protection against fire and explosion : Keep product and empty container away from heat and sources of ignition.  
No smoking.  
Take precautionary measures against static discharges.  
Vapours may form explosive mixtures with air.

**Storage**

Conditions for safe storage, including any incompatibilities : Store in area designed for storage of flammable liquids. Protect from physical damage.  
Keep containers tightly closed in a dry, cool and well-ventilated place.  
Store in original container.

Advice on common storage : Do not store together with:  
Oxidizing agents

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Protective measures : Ensure that eyewash stations and safety showers are close to

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the workstation location.

Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment. Avoid inhalation of vapour or mist.

- Engineering measures : Use with local exhaust ventilation. Prevent vapour buildup by providing adequate ventilation during and after use.
- Eye protection : Safety goggles
- Hand protection : Wear nitrile rubber gloves to avoid contact with the skin. Gloves must be inspected prior to use. Replace when worn.
- Skin and body protection : Protective suit
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures : Ensure adequate ventilation, especially in confined areas. When using do not eat or drink.

**Exposure Guidelines**

| Components  | CAS-No. | Value                                      | Control parameters     | Update | Basis   |
|-------------|---------|--|------------------------|--------|---|
| Propan-1-ol | 71-23-8 | TWA :<br>Time weighted average             | (100 ppm)              | 2008   | ACGIH:US. ACGIH Threshold Limit Values, as amended                  |
| Propan-1-ol | 71-23-8 | STEL :<br>Short term exposure limit        | 625 mg/m3<br>(250 ppm) | 2005   | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended |
| Propan-1-ol | 71-23-8 | REL :<br>Recommended exposure limit (REL): | 500 mg/m3<br>(200 ppm) | 2005   | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended |

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|             |         |                                  |                                   |         |  |
|-------------|---------|----------------------------------|-----------------------------------|---------|--|
| Propan-1-ol | 71-23-8 | SKIN_DES : Skin designation:     | Can be absorbed through the skin. | 2005    | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended                      |
| Propan-1-ol | 71-23-8 | PEL : Permissible exposure limit | 500 mg/m3 (200 ppm)               | 02 2006 | OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended |
| Propan-1-ol | 71-23-8 | STEL : Short term exposure limit | 625 mg/m3 (250 ppm)               | 1989    | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended                                  |
| Propan-1-ol | 71-23-8 | TWA : Time weighted average      | 500 mg/m3 (200 ppm)               | 1989    | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended                                  |

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

|                             |  |
|-----------------------------|--|
| Physical state              | : liquid                                       |
| Color                       | : colourless                                   |
| Odor                        | : alcohol-like                                 |
| pH                          | : 8.5 at 200.00 g/l, 20 °C                     |
| Melting point/range         | : -127 °C                                      |
| Boiling point/boiling range | : 96 - 98 °C at 1,013 hPa<br>Method: DIN 53171 |

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|   |   |
|---|---|
| Flash point                               | : < 70 °F (21 °C)<br>Method: DIN 51755  |
| Evaporation rate                          | : Note: No data available   |
| Lower explosion limit                     | : 2.4 %(V)  |
| Upper explosion limit                     | : 10.8 %(V)   |
| Vapor pressure                            | : 28.2 hPa<br>at 25 °C(77 °F)   |
| Vapor density                             | : Note: No data available   |
| Density                                   | : 0.803 - 0.804 g/cm <sup>3</sup> at 20 °C  |
| Water solubility                          | : Note: completely miscible   |
| Solubility in other solvents              | : Note: Soluble in most organic solvents  |
| Partition coefficient:<br>n-octanol/water | : log Pow: 0.20 - 0.34 at 25 °C   |
| Ignition temperature                      | : 395 °C  |
| Auto-ignition temperature                 | : Note: not auto-flammable  |
| Decomposition temperature                 | : Note: At normal pressure may be distilled without<br>decomposition., Fire or intense heat may cause violent rupture<br>of packages. |
| Viscosity, dynamic                        | : 2.21 mPa.s at 20 °C   |
| Viscosity, kinematic                      | : Note: No data available   |



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Molecular weight : 60.1 g/mol

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.  
Hazardous polymerisation does not occur.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:  
Carbon oxides

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity : LD50: 8,038 mg/kg  
Species: Rat

Acute inhalation toxicity : LC50: > 33.8 mg/l , vapour  
Exposure time: 4 h  
Species: Rat  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50: 4,032 mg/kg  
Species: Rabbit, male  
Method: OECD Test Guideline 402

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|                       |   |
|-----------------------|---|
| Skin irritation       | : Species: Rabbit<br>Result: slight irritation  |
| Eye irritation        | : Species: Rabbit<br>Result: Risk of serious damage to eyes.  |
| Sensitisation         | : Maximisation Test<br>Species: Guinea pig<br>Result: Did not cause sensitisation on laboratory animals.    |
| Genotoxicity in vitro | : Test Method: Ames test<br>Metabolic activation: with and without metabolic activation<br>Result: negative |
| Further information   | : Note: Solvent vapours have a narcotic effect if inhaled in high concentrations.                           |

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

|   |  |
|---|--|
| Toxicity to fish                                    | : flow-through test<br>LC50: 4,555 mg/l<br>Exposure time: 96 h<br>Species: Pimephales promelas (fathead minnow)<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : static test<br>LC50: 3,644 mg/l<br>Exposure time: 48 h<br>Species: Daphnia magna (Water flea)<br>Method: DIN 38412                               |
| Toxicity to algae                                   | : static test<br>NOEC: 1,150 mg/l<br>Exposure time: 48 h   |

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Species: *Chlorella pyrenoidosa*

Toxicity to bacteria : static test  
IC50: > 1,000 mg/l  
Exposure time: 3 h  
Species: activated sludge  
Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : semi-static test  
NOEC: > 100 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)  
Method: OECD Test Guideline 211

**Elimination information (persistence and degradability)**

Bioaccumulation : Note: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Biodegradability : Note: Readily biodegradable.

**Further information on ecology**

Adsorbed organic bound halogens (AOX) : Note: Product does not contain any organic halogens.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

**SECTION 14. TRANSPORT INFORMATION**

|            |                      |              |
|------------|----------------------|--------------|
| <b>DOT</b> | UN/ID No.            | : UN 1274    |
|            | Proper shipping name | : n-Propanol |
|            | Class                | 3            |
|            | Packing group        | II           |
|            | Hazard Labels        | 3            |

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**IATA** UN/ID No. : UN 1274  
 Description of the goods : n-Propanol  
 Class : 3  
 Packaging group : II  
 Hazard Labels : 3  
 Packing instruction (cargo aircraft) : 364  
 Packing instruction (passenger aircraft) : 353  
 Packing instruction (passenger aircraft) : Y341

**IMDG** UN/ID No. : UN 1274  
 Description of the goods : n-Propanol  
 Class : 3  
 Packaging group : II  
 Hazard Labels : 3  
 EmS Number : F-E, S-D  
 Marine pollutant : no

**SECTION 15. REGULATORY INFORMATION****Inventories**

USA. List of Active Substances on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory, as amended : On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended : On the inventory, or in compliance with the inventory

Canada. Domestic Substances List (DSL), as amended : All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

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Philippines. Inventory of Chemicals and Chemical Substances (PICCS) : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC) : On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI) : On the inventory, or in compliance with the inventory

**National regulatory information**

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

**SARA 313 Components** : 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.

**SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard

**California Prop. 65** : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**Massachusetts RTK** : Propan-1-ol 71-23-8

**New Jersey RTK** : Propan-1-ol 71-23-8

**Pennsylvania RTK** : Propan-1-ol 71-23-8

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**SECTION 16. OTHER INFORMATION**

|                 | <b>HMIS III</b> | <b>NFPA</b> |
|-----------------|-----------------|-------------|
| Health hazard   | : 2*            | 1           |
| Flammability    | : 3             | 3           |
| Physical Hazard | : 0             |             |
| Instability     | :               | 0           |

\* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

**Further information**

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. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 04/05/2022

Prepared by Honeywell Energy and Sustainability Solutions Product Stewardship Group Product Stewardship Group