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# Material Safety Data Sheet

According to Globally Harmonized System(GHS)

## Section 1- Chemical product and company identification

**MSDS Name:** N-Propanol

**Synonyms:** 1-Propanol; propan-1-ol; N-Propyl Alcohol

**Company Name:** Henan GP Chemicals co.,ltd

**Add:** Rm1030,24T FLOOR xiyue center ,zhenghong cyberport,no.33 jinsuo road,

zhengzhou,china

**Tel (Emergency consultation for chemical accident):** 0086-371-56035293

**Main application:** as solvent ,used for pharmaceuticals, paints and cosmetics.

## Section 2- Hazard(s) Identification

### Classification:

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquid-3, eye irritation- 1,  
Specific target organ toxicity (disposable contact)-3,  
Target Organs - Central nervous system (CNS)



**Hazard Pictograms:**

**Signal word:** .....Danger.....

**Hazard statements:**

Highly flammable liquid and vapor; causes serious eye damage; inhalation may cause drowsiness or dizziness; Maybe harmful if swallowed and enters airway.

**Precautionary statement:**

Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.

IF SWALLOWED: Immediately call a POISON CENTER doctor;

IF ON SKIN(or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,if present

and easy to do, Continue rinsing.

Store locked up. Keep container tightly closed.

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

### Section 3- Component, Information on Ingredients

substance

mixture

CAS#	Chemical name	purity	EINECS/ELINCS
71-23-8	N-propanol	99.6%	200-746-9

### Section 4- First Aid Measures

**Skin:** Immediately remove contaminated clothing, Flushing skin and hair with flowing water or soap water.

**Eye:** Lift the upper and lower eyelids. Flush eyes with flowing water for at least 15 minutes. Get medical aid.

**Inhalation:** Remove from exposure and move to fresh air immediately. Keep airway patency. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. And heart massage. Get medical aid.

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**Ingestion:** Gargle and drink plenty of water, Get medical aid.

## Section 5- Firefighting Measures

**Hazardous characteristics:** Flammable. It's vapor and air can form explosive mixture. Encountered fire, high heat ,may cause combustion explosion. It'll be a strong reaction with oxidants. It's water vapor is heavier than air, can arrive at a far place lower spread, encountered fire will strile-fire.

**Suitable extinguishing agents:** Use Carbon dioxide, dry powder, sand..

Fight large fires with water spray or anti-insoluble foam

**Notes and Measures:** Firefighters must wear a self-contained air breathing apparatus, wear fire protective body suits, fire in the upwind. Can adopt water spray to cooling the container. If possible, move containers from fire to open. If the containers in the fireground is easy to discolor or generate sound from the safety relief devices, we must be immediately evacuated.

## Section 6– Emergency treatment measures of leakage

**Protective measures for workers, protective equipment and emergency procedures:** eliminate all ignition sources. According to the liquid flow and the effect area of neat diffusion delimit warning zone. Persons who're not relevant should evacuate to the safe area from the side wind or windward side wind,. Emergency personnel wear self positive pressure respirator, wear anti-static overalls. De wear resistant rubber oil gloves. All equipment should be grounded when used. No Touch or cross the leakage.

**Environmental protection measures:** to prevent the leakage of logistics into the limited space such as sewers, flood channel.

**Method of leakage of chemicals containing, cleaning and disposal of materials used:**

A small leak: activated carbon or other inert materials can also be absorbed. A lot of water washing, diluted into the wastewater system.

A large leak: construct a dike or dig a pit to contain. Covered with foam, reduce disasters. Steam explosion proof pump transferred to tank-exclusive collector, recycling or shipped to the disposal of waste disposal sites.

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Water leakage: if there is no danger, can take action to prevent the leakage of oil leakage, immediately gate limit range, the surface feeding way, warn other ships.

The above leaking disposal suggestions are put forward according to the leakage of the material most likely; however, various natural conditions are likely to take a large influence of the scheme, we should consult the local experts. Note: local regulations may be taken on the scheme regulations or restrictions.

## Section 7- Handling and Storage

**Handling:** Closed operation, overall ventilation. The operator must go through specialized training, strictly abide by the rules. It is suggested that operators wear self absorption filter mask (half mask), wearing protective chemical safety glasses, wear anti-static overalls, wear rubber oil resistant gloves. Keep away from fire, heat. smoking is prohibited in the workplace. Use explosion-proof ventilation systems and equipment. To prevent steam leakage in the air of workplace. Avoid contacting with strong oxidizing agents, acid anhydride, halogen. When filling, we'd control the velocity (not more than 5m/s) and has a grounding device to prevent the accumulation of static electricity. When moving to light unloading, prevent damage to packaging and containers. Equipped with corresponding quantity and variety of fire equipment and emergency treatment equipment. The empty containers may be remain harmful substance.

**Storage:** Store in a cool, ventilated warehouse. Keep away from fire and heat. The temperature of should not exceed 30 °C 。 Keep away from sources of ignition. Do not store near combustible materials. Keep from contact with oxidizing materials. Should be separated with strong oxidizing agents, acids, halogen, avoid mixing reservoir. Use the explosion-proof lighting, ventilation facilities. Mechanical equipment and tools which easy to produce sparks are prohibited used. Storage areas should be equipped with emergency treatment equipment and proper acceptance materials

## Section 8- Contact Controls, Personal Protection

### Occupation exposure limit:

China MAC(mg/m3): 200

Soviet Union: MAC(mg/m3): 10

**Monitoring methods:** gas chromatography; hydroxylamine-ferric chloride Spectrophotometry

**Engineering control methods:** Closed production process, strengthen ventilation. Provide safety shower and eyewash equipment.

**Respiratory protection:** We'd wear self absorption filter mask (half mask) when may contact its vapor. When told emergency rescue or evacuation, it is recommended to wear air respirator.

**Hand:** wear rubber oil resistant gloves.

**Eye:** wear chemical safety goggles.

**Skin and body:** Wear anti-static overalls.

**Other protection:** work site smoking, eating and drinking. After work, take a shower. Before working and the regular physical examination

## Section 9- Physical and Chemical Properties

**Appearance:** colorless, liquid

**Odor:** /

**PH-value:** /

**Freezing/Melting Point:-** 127 deg C

**Boiling Point:** 97 deg C

**Flash Point:** 26.0°C ,

**Upper/Lower limit of explosion %(V/V):** /

**Vapor Pressure(kPa):** 2,8kPa (25°C) ,

**Vapor Density: (air= 1):** 2.07

**Relative density (water=1):** 0.8035

**Critical pressure: (MPa):** 5.17

**Distribution coefficient of n-octanol/water:** /

**Auto-ignition / critical temperature:** 371°C ,

**Decomposition temperature /odor threshold/ evaporation rate:** not available.

**Solubility:** miscible with water, can miscible with alcohol, ether and most organic solvents.

**VOC (EC):** ≥99.6

## Section 10- Stability and Reactivity

**Stability:** Stable

**Conditions to Avoid:** open-fire, excess heat.

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**Hazardous Decomposition Products:** Carbon monoxide and carbon dioxide

**Incompatibilities with Other Materials:** strong oxidizing agents, acid anhydride, strong acids, Halogens.

## Section 11- Toxicological Information

**Acute toxicity:** LD 50: 1870 mg/kg(Oral, mouse );5040 mg/kg(skin, rabbit)。

LC 50 = 48000 mg/m<sup>3</sup> (Inhalation in mouse)

**Skin /Eye irritation or corrosion :** type 2

**Inhalation hazard:** type 4, inhalation of harmful

**Skin allergy/ germ cell mutagenicity/carcinogenicity/reproductive toxicity:** not available

**Specific target organ system toxicity---**disposable /repeated contact: not available

**Pharmacokinetics, metabolism and distribution information:** not available

## Section 12- Ecological Information

**Aquatic toxicity/ Persistence and degradability---** not available

**Potential bioaccumulation/ mobility in soils---** not available

## Section 13– Disposal Considerations of waste

**Disposal method:** Incineration.

**Note:** Waste must be cleaned and meet the requirements of environmental protection.

**Residual waste and contaminated containers and packaging:** should be disposal by qualified unit as hazardous waste.

## Section 14- Transport Information

Dangerous cargo No. : 32064



Transport hazard class:



DOT/ TDG /IATA/ IMDG/IMO:

UN-Number	UN1274
Proper Shipping Name	N-PROPANOL(N-PROPYL ALCOHOL
Hazard Class	3
Packing Group	III

**Packing method:** closed steel drum; threaded bottles, iron cap glass bottle mouth pressure, plastic or metal barrels (cans) ordinary wooden case.

**Transport notes:** transport vehicles should be equipped with corresponding quantity and variety of fire equipment and emergency treatment equipment. It's best to transport in the morning and evening in summer. The tank car should be grounded chain in the groove hole baffles to reduce shock electrostatic. With no oxidant, acid, alkali, edible chemicals mixed-transport. Transportation should prevent solarization, rain, and high temperature. Midway away from fire, heat, high temperature zone residence. Shipment of the goods vehicle exhaust pipe must be equipped with fire resistance device, prohibit the use of easy to produce the spark of mechanical equipment and tool handling. Highway transportation according to regulations when driving route stay, not in residential areas and densely populated areas. The railway transportation should be prohibited. Prohibit the use of wooden rolling, cement ship bulk transport.

## Section 15- Regulatory Information

-  Safety, health and environmental regulations/legislation section for the substance or mixture
-  Status of global inventories:

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All component(s) within this product is listed or exempted from the following country's chemical inventory:

USA--- TSCA	Australia--- AICS	Canada--- DSL	China--- IECSC
EU---EINECS/NLP	Japan---ENCS	Korea--- KECI	Taiwan---ECSI
New Zealand---NZIOC	Philippines--- PICCS		Mexico--- INSQ

Chemical safety assessment: It has not been carried out.

## Section 16- Additional Information

### **Instruction of Abbreviation:**

ADR: Accord europeen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code fro Dangerous Goods

IATA: International Air Transport Association

EINES: European Inventory of Existing Commercial Chemical Substances

VOC: Volatile Organic Compounds (USA, EU)

### **General Disclaimers:**

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Henan gp be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if henan Gp has been advised of the possibility of such damages.*