

Material Safety Data Sheet

1. Product and company identification

Product Name : 1,5-Pentanediol

Company : Yuanli Chemical Group Co.,Ltd.

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2. Hazards identification

Emergency Overview: Combustible, decomposes on heating emitting pungent smoke and fumes.

Irritates eyes and skin.

GHS hazard category: According to the GB30000 series of Rules for Classification And Labelling Of Chemicals, this product is classified as Severe eye damage/eye irritation, category 2B; Skin corrosion/irritation, category 3.

Pictogram(s): No Pictograms

Signal word: Warning

Hazard statements: Causes eye irritation; causes minor skin irritation.

Precautionary statements

Precautionary measures: operate airtight and pay attention to ventilation. It is recommended that operators wear chemical safety glasses, fireproof and anti-toxic work clothes and rubber gloves. Keep away from fire and heat source, smoking is strictly prohibited in the workplace; use explosion-proof ventilation system and equipment. Avoid contact with oxidizing agents and acids, lightly load and unload when handling, prevent damage to packaging and containers; empty containers may have harmful substances.

Incident Response

Refer to Part 4 First Aid Measures.

Safe storage

Refer to Part 7 Handling And Storage.

Disposal

Refer to Part 7 Handling And Storage.

Physical and chemical hazard: flammable liquid. Its vapour, when mixed with air, can form explosive mixtures. Combustion produces toxic carbon monoxide gas.

Health hazards: May cause inflammation of the skin. May cause inflammation of the eyes. Damaging to the respiratory system and irritating to the airways.

Environmental hazards: The substance is slightly hazardous to water.

3. Composition/information on ingredients

Composition:

Material	Cas No.	Concentration %
1,5-Pentanediol	111-29-5	99%

4. First aid measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

5. Fire-fighting measures

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Closed Cup: 136°C (276.8°F).

Flammable Limits: Not available.

Products of Combustion: CO, CO₂

Fire Hazards in Presence of Various Substances: Not available.

Extinguishing methods and extinguishing agents: Putting out fires upwind. Move the container from the fire to an open area if possible. Spray water to keep containers in the fire cool until the fire is extinguished. Containers in the fire must be evacuated immediately if they have become discoloured or if sound is produced from the safety relief device.

Extinguishing agents: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Fire fighting precautions and measures: Small area fires can be extinguished with fire blankets. When extinguishing a fire, firefighters must wear a gas mask, full body fire suit and positive pressure self-contained air breathing apparatus and extinguish the fire upwind.

6. Accidental release measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

7. Handling and storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/ spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage:

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

8. Exposure controls/personal protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

9. Physical and chemical properties

Physical state and appearance: Liquid. (Oily liquid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 104.15 g/mole

Color: Not available.

pH (1% soln/water): Not available.

Boiling Point: 239°C (467.6°F)

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity:	0.99 1(Water = 1)
Vapor Pressure(KPa):	<0.0013(20°C)
Vapor Density:	3.59 (AIR=1)
Volatility:	Not available.
Odor Threshold:	Not available.
Water/Oil Dist. Coeff.:	Not available.
Ionicity (in Water):	Not available.
Dispersion Properties:	See solubility in water.
Solubility:	Soluble in cold water.

10. Stability and reactivity

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

11. Toxicological information

Routes of Entry: Eye contact. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 2000 mg/kg [Rat].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

12. Ecological information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

13. Disposal considerations

Waste Disposal

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

15. Regulatory information

Federal and State Regulations: TSCA 8(b) inventory: 1,5-Pentanediol

Other Regulations: Not available..

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

R22- Harmful if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

16. Other information

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 Yuanli Chemical Group Co.,Ltd. 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 Yuanli Chemical Group Co.,Ltd. has been advised of the possibility of such damages.