产品说明: 1,2-丙二醇, 98+%

**1,2-Propanediol**

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

**Product Description: 1,2-Propanediol**

## Cat No. : A18406

**Synonyms** Propylene glycol

**CAS No** 57-55-6

**Molecular Formula** C3 H8 O2

1. **Supplier** EPOCHMASTERGLOBALBUSINESS(JIANGSU) INC.

RM.3-93,TENGFEIBUILDING,NO.88 JIANGMIAORD.,RESEARCHANDINNOVATION PARK,NANJING ZONE, (JIANGSU) PILOTFREETRADEZONE,CHINA.

**Emergency Telephone Number** Call Carechem 24 at

+86258336556

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**SECTION 2. HAZARD IDENTIFICATION**

**Physical State**

Viscous liquid Liquid

**Appearance**

Clear Colourless

**Odor**

Odorless

**Emergency Overview**

Hygroscopic.

**Classification of the substance or mixture**

Based on available data, the classification criteria are not met

**Label Elements**

None required

## Physical and Chemical Hazards

Hygroscopic.

## Health Hazards

The product contains no substances which at their given concentration are considered to be hazardous to health

## Environmental hazards

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. Will likely be mobile in the environment due to its water solubility. The product is water soluble, and may spread in water systems.

## Other Hazards

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

|  |  |  |
| --- | --- | --- |
| **Component** | **CAS No** | **Weight %** |
| 1,2-Propylene glycol | 57-55-6 | >95 |

**SECTION 4. FIRST AID MEASURES**

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

## Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

## Inhalation

Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.

## Ingestion

Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

## Most important symptoms and effects

No information available.

## Self-Protection of the First Aider

No special precautions required.

## Notes to Physician

Treat symptomatically. Symptoms may be delayed.

**SECTION 5. FIRE-FIGHTING MEASURES**

## Suitable Extinguishing Media

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

## Extinguishing media which must not be used for safety reasons

No information available.

## Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

## Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

## Personal Precautions

Use personal protective equipment as required. Ensure adequate ventilation.

## Environmental Precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

## Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7. HANDLING AND STORAGE**

## Handling

Ensure adequate ventilation. Wear personal protective equipment/face protection.

## Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

## Specific Use(s)

Use in laboratories

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

## Control Parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Component** | **China** | **Taiwan** | **Hong Kong** | **The United Kingdom** |
| 1,2-Propylene glycol | - | - | - | STEL: 450 ppm 15 min  STEL: 1422 mg/m3 15 min  STEL: 30 mg/m3 15 min  TWA: 150 ppm 8 hr  TWA: 474 mg/m3 8 hr  TWA: 10 mg/m3 8 hr |

**Exposure Controls Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. .

## Personal protective equipment

**Eye Protection** Wear safety glasses with side shields (or goggles) (European standard - EN 166)

**Hand Protection** Protective gloves

**Glove material** Nitrile rubber Neoprene gloves Viton (R)

**Breakthrough time Glove thickness**

**EU standard**

**Glove comments**

* 480 minutes
* 480 minutes
* 480 minutes

0.28 mm

0.38 mm

0.3 mm

Level 6 EN 374 As tested under EN374-3 Determination of

Resistance to Permeation by Chemicals

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection** Long sleeved clothing

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Recommended Filter type:** Particle filter

**Small scale/Laboratory use** Maintain adequate ventilation

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

|  |  |  |
| --- | --- | --- |
| **Appearance Physical State**  **Odor**  **Odor Threshold** | Clear Colourless Viscous liquid Liquid  Odorless  No data available |  |
| **pH**  **Melting Point/Range Softening Point Boiling Point/Range Flash Point** | 6.5-7.5  -60 °C / -76 °F  No data available 187 °C / 368.6 °F  99 °C / 210.2 °F | 100g/l aq. sol  **Method -** No information available |
| **Evaporation Rate Flammability (solid,gas)** | No information available Not applicable | Liquid |
| **Explosion Limits** | **Lower** 2.5 vol % |  |
|  | **Upper** 12.6 vol % |  |
| **Vapor Pressure Vapor Density**  **Specific Gravity** / **Density** | 0.13 mbar @ 20 °C 2.62 (Air = 1.0)  1.03 - 1.04 | (Air = 1.0) |
| **Bulk Density Water Solubility**  **Solubility in other solvents** | Not applicable Completely soluble  No information available | Liquid |

## Partition Coefficient (n-octanol/water) Component log Pow

1,2-Propylene glycol -0.9

**Autoignition Temperature** 400 °C / 752 °F **Decomposition Temperature** No data available **Viscosity** 45 mPa.s at 20 °C

**Explosive Properties** No information available

**Oxidizing Properties** No information available

**Molecular Formula** C3 H8 O2

**Molecular Weight** 76.10

**SECTION 10. STABILITY AND REACTIVITY**

**Stability** Hygroscopic.

**Hazardous Reactions** No information available.

**Hazardous Polymerization** No information available.

**Conditions to Avoid** Incompatible products. Excess heat. Exposure to moist air or water.

**Materials to avoid** Strong oxidizing agents. Acids.

**Hazardous Decomposition Products** Carbon monoxide (CO). Carbon dioxide (CO2).

**SECTION 11. TOXICOLOGICAL INFORMATION**

## Product Information

1. **acute toxicity;**

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | **LD50 Oral** | **LD50 Dermal** | **LC50 Inhalation** |
| 1,2-Propylene glycol | LD50 = 20 g/kg ( Rat ) | LD50 = 20800 mg/kg ( Rabbit ) |  |

1. **skin corrosion/irritation;** Based on available data, the classification criteria are not met
2. **serious eye damage/irritation;** Based on available data, the classification criteria are not met

## respiratory or skin sensitization;

**Respiratory** Based on available data, the classification criteria are not met

**Skin** Based on available data, the classification criteria are not met

1. **germ cell mutagenicity;** Based on available data, the classification criteria are not met
2. **carcinogenicity;** Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

1. **reproductive toxicity;** Based on available data, the classification criteria are not met
2. **STOT-single exposure;** Based on available data, the classification criteria are not met
3. **STOT-repeated exposure;** Based on available data, the classification criteria are not met

**Target Organs** None known.

1. **aspiration hazard;** Based on available data, the classification criteria are not met

## Symptoms / effects,both acute and delayed No information available

**SECTION 12. ECOLOGICAL INFORMATION**

## Ecotoxicity effects .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Component** | **Freshwater Fish** | **Water Flea** | **Freshwater Algae** | **Microtox** |
| 1,2-Propylene glycol | LC50: = 51600 mg/L,  96h static (Oncorhynchus mykiss) LC50: 41 - 47 mL/L,  96h static (Oncorhynchus mykiss) LC50: = 51400 mg/L,  96h static (Pimephales promelas)  LC50: = 710 mg/L, 96h  (Pimephales promelas) | EC50: > 1000 mg/L, 48h  Static (Daphnia magna) | EC50: = 19000 mg/L,  96h (Pseudokirchneriella subcapitata) | = 710 mg/L EC50  Photobacterium phosphoreum 30 min |

**Persistence and Degradability**

**Persistence** Miscible with water, Persistence is unlikely, based on information available.

**Bioaccumulative Potential** Bioaccumulation is unlikely

|  |  |  |
| --- | --- | --- |
| **Component** | **log Pow** | **Bioconcentration factor (BCF)** |
| 1,2-Propylene glycol | -0.9 | <1 dimensionless |

**Mobility in soil** The product is water soluble, and may spread in water systems. Will likely be mobile in the

environment due to its water solubility Highly mobile in soils

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Ozone Depletion Potential** This product does not contain any known or suspected substance

**SECTION 13. DISPOSAL CONSIDERATIONS**

## Waste from Residues/Unused Products

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

**Contaminated Packaging** Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use

empty containers.

**Other Information** Waste codes should be assigned by the user based on the application for which the product

was used.

**SECTION 14. TRANSPORT INFORMATION**

**Road and Rail Transport** Not Regulated

**IMDG/IMO** Not regulated

**IATA** Not regulated

**Special Precautions for User** No special precautions required

**SECTION 15. REGULATORY INFORMATION**

## International Inventories

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Component** | **The Inventory of Hazardous Chemicals (2015**  **Edition)** | **List of dangerous goods GB 12268 -**  **2012** | **TCSI** | **IECSC** | **EINECS** | **TSCA** | **DSL** | **PICCS** | **ENCS** | **ISHL** | **AICS** | **KECL** |
| 1,2-Propylene glycol | - | - | X | X | 200-338-0 | X | X | X | X | X | X | KE-29267 |

## National Regulations

**SECTION 16. OTHER INFORMATION**

**Prepared By** Health, Safety and Environmental Department

**Creation Date** 19-Nov-2009

**Revision Date** 14-Jan-2021

**Revision Summary** Not applicable.

## Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

**Legend**

**CAS** - Chemical Abstracts Service **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic

Substances/EU List of Notified Chemical Substances Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances **ENCS** - Japanese Existing and New Chemical Substances **IECSC** - Chinese Inventory of Existing Chemical Substances **AICS** - Australian Inventory of Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances **NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit **TWA** - Time Weighted Average

**ACGIH** - American Conference of Governmental Industrial Hygienists **IARC** - International Agency for Research on Cancer

**DNEL** - Derived No Effect Level Predicted No Effect Concentration (PNEC)

**RPE** - Respiratory Protective Equipment **LD50** - Lethal Dose 50%

**LC50** - Lethal Concentration 50% **EC50** - Effective Concentration 50%

**NOEC** - No Observed Effect Concentration **POW** - Partition coefficient Octanol:Water

**PBT** - Persistent, Bioaccumulative, Toxic **vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**OECD** - Organisation for Economic Co-operation and Development **ATE** - Acute Toxicity Estimate

**BCF** - Bioconcentration factor VOC (volatile organic compound)

## Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

## Disclaimer

**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**

# End of Safety Data Sheet