

Safety Data Sheet

1. IDENTIFICATION

Product Name:	Propylene glycol
Other Names:	-
Recommended Use:	Use as raw materials for unsaturated polyester resins. It can be used as a humectant in combination with glycerine or sorbitol in cosmetics, toothpaste and soap. In hair dyes, it is used as a moisturizing and leveling agent. It can also be used as an antifreeze, as well as in cellophane, plasticizer
Supplier:	Global Chemie ASCC Limited
Street Address:	88/123 Moo 2 Bangpoo Industrial Estate (North), Phraek Sa Mai, Mueang Samutprakan, Samutprakan 10280
Telephone:	+66 2324 6888
Fax:	+66 2324 6898-99
Emergency phone:	+66 2324 6888 ext.320

2. HAZARDS IDENTIFICATION

Hazardous Nature

This product is not classified as hazardous under GHS criteria

Hazardous Classification

No data available

Hazardous Statement

No data available

GHS Pictograms

No data available

Hazard Statements

No data available

Precautionary Statements

No data available

Response Statements

If on skin

No data available

If inhaled

No data available

If in eye

No data available

Storage Statements

No data available

Disposal Statements

P501: Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied.

Signal Word: No signal word

3. COMPOSITION: Information on Ingredients

Chemical Ingredient	CAS No.	UN No.	Proportion (%v/v)
Propylene glycol	57-55-6	-	> 99.5

Molecular Formula: C₃H₈O₂

Molecular weight: 76.094 g/mol

4. FIRST AID MEASURES

For advice, contact Ramathibodi Poison Center (Phone: 1367) or a doctor.

Ingestion

Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

Eye Contact

Flush eyes with water thoroughly and continuously for 15 minutes. Remove contact lenses, if present and easy to do. If irritation persists, get medical advice/attention.

Skin Contact

Wash skin thoroughly with mild soap and water

Inhalation

Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Avoid inhalation of hot vapors or extremely high concentrations of aerosols. Remove to fresh air. Consult a physician if necessary.

First Aid facilities

Provide eye baths and safety showers.

Medical Attention

Treat according to symptoms. Avoid gastric lavage: risk of aspiration of product to the lungs with the potential to cause chemical pneumonitis.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing media: SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam.

LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

Unsuitable: Extinguishing media: Do not use solid water stream.

Special hazards arising from the substances or mixture: No information available.

Advice for firefighters: In the event of fire, wear self-contained breathing apparatus. Structural firefighter's protective clothing will only provide limited protection.

6. ACCIDENTAL RELEASE MEASURES**Emergency Procedures**

Prevent fluid from escaping to drains and waterways. Contain leaking packaging in a containment drum. Prevent vapours from building up in confined areas. Ensure that drain valves are always closed. Clean up and report spills immediately.

Methods and materials for containment**Protective Measures**

- Observe all relevant local and international regulations.
- Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see chapter 8 this Material Safety Data Sheet. Shut off leaks, if possible, without personal risks. Remove all possible sources of ignition in the surrounding area. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
- Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.

Clean-Up Methods

- ◆ Small spillage (< 200 LT) : Transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
- ◆ large spillage (> 200 LT) : Transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Other Information

Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

7. HANDLING AND STORAGE

Precautions for safe handling

Handle empty containers with care. residue can burn if heated. Empty containers should be thoroughly rinsed with copious amounts of clean water. The rinse water can be used for makeup water for any necessary dilution of the concentrated product before use, or it can be properly discarded Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed. -Protect from moisture. Store away from heat. Material can attack some forms of plastics. Do not store together with oxidizing and self-igniting products. Advice on common storage: Carbon/Mild Steel, with suitable internal coating, or stainless steel.

Other data : No decomposition if stored and applied as directed.

Special end use(s)

No data available.

8. EXPOSURE CONTROLS: PERSONAL PROTECTION

Occupational Exposure limit values

Component	Country	Occupational exposure limits	
propane-1,2-diol	Latvia	-	7 mg/m ³
	Ireland	150 ppm	471 mg/m ³

Appropriate engineering controls

Avoid splashing. Avoid creating mist or spray. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the workstation. Provide local exhaust or general room ventilation.

Individual protection measures, such as personal protective equipment (PPE)

Hand protection: Not normally considered a skin hazard. Wear chemical resistant gloves such as:-If protective gloves are used, the glove material must be resistant to the substance.

Glove material for example, Nitrile rubber/Nitrile latex (NBR; GESTIS substance database (hazardous substance information system of commercial professional associations). Gloves must be replaced after 8 hours of wear. The selected protective gloves must satisfy the European standard EN 374. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection: Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor. The selected goggles or glasses must satisfy the European standard EN 166.

Hygiene measures: When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head, and face protection should be worn. Depending on risk assessment, the selected protective clothing must satisfy EU standard EN 13034, which describes clothing offering limited 8-hour protection against splashes, or EU standard EN 14605, which describes liquid- or spray-tight clothing. Choose body protection according to the amount and

concentration of the dangerous substance at the workplace. Use PPE that is chemical resistant to the product and prevents skin contact. Fire retardant and anti-static clothing is appropriate for routine occupational use.

Skin protection: Wash at mealtime and end of shift is adequate. Wear fear/flame resistant and impervious clothing. Handle with gloves. Gloves must inspect prior to use. Wash and dry hands. The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory: No personal respiratory protective equipment normally required. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive-pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter conforming to EU standards EN 140 and EN 14387 respectively. Select a type A filter or better.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of Measurement	Typical Value
Appearance	-	Colorless liquid
Odour	-	Bitter
pH	-	No data available
Boiling point	°C	187.2
Melting point	°C	-59
Flash point	°C	99
Autoignition Temperature	°C	371
Decomposition Temperature	°C	No data available
Lower/Upper Flammability Limits	%V	2.6-12.6
Density @ 25°C	g/cm ³	1.03 (20 °C)
Specific Gravity @ 25°C	-	No data available
Viscosity @ 25°C	cSt	43.4
Vapor pressure	kPa	0.02 Pa (25 °C)
Vapor density	kPa (Air = 1)	2.62 (Air = 1.0)
Evaporation Rate	(n-Butyl acetate = 1)	No data available
Water Solubility	-	Miscible with water, soluble in ethanol, ether, most organic solvents
Solubility in other solvents Partition coefficient	(n-octanol/water)	No data available
Coefficient of Thermal Expansion	per Deg °C	No data available

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Product Data Sheet.

10. STABILITY AND REACTIVITY

Reactive

This material is stable when properly handled and stored.

Chemical stability.

This material is stable when properly handled and stored.

Possibility of hazardous reactions.

Thermal decomposition may produce carbon monoxide and other toxic vapors.

Conditions to avoid

High temperatures, oxidizing conditions.

Incompatible materials

Strong acids, Isocyanates, strong oxidizing agents.

Hazardous decomposition products

Carbon Monoxide and other toxic vapours.

11. TOXICOLOGICAL INFORMATION**Acute Toxicity**

Component	Oral	Dermal	Inhalation
Propane-1,2-diol Rat,	LD50 = 2,2000 mg/kg bw Rabbit,	LD50 > 2,000 mg/kg bw Rabbit,	LD50 > 317.042 mg/m ³ air (2h)

Carcinogenicity

Component	IARC	NTP
Propane-1,2-diol	Not listed	Not listed

Other

Endpoint	Component	Toxicological Information
Skin corrosion/irritation	Propane-1,2-diol	Not irritating
Serious eye damage/irritation	Propane-1,2-diol	No information available.
Skin sensitization	Propane-1,2-diol	No information available
Respiratory sensitization	Propane-1,2-diol	No information available
Reproductive toxicity	Propane-1,2-diol	P0: Mouse,NOAEL= 10100 mg/kg bw/day (actual dose received) F1: Mouse,NOAEL= 10100 mg/kg bw/day (actual dose received) F2: Mouse,NOAEL= 10100 mg/kg bw/day
STOT-single exposure	Propane-1,2-diol	No information available
STOT-repeated exposure	Propane-1,2-diol	No information available
Aspiration hazard	Propane-1,2-diol	No information available
Germ cell mutagenicity	Propane-1,2-diol	Negative(vitro/vivo)

12. ECOLOGICAL INFORMATION**Ecological toxicity**

Component	Fish	Aquatic invertebrates	Aquatic algae and cyanobacteria
Propane-1,2-diol	Acute: Oncorhynchus mykiss, LC50 = 40,613 mg/L (96h) Long term: Long-term exposure of fish is not considered relevant as the substance is readily biodegradable.	Acute: Ceriodaphnia dubia, LC 50 = 18,340 mg/L (48 h) Long term: Ceriodaphnia sp, NOEC =13,020mg/L (7d)	Raphidocelis subcapitata, EC50 =19,000 mg/L (96 h)

Other

Endpoint	Component	Toxicological Information
Persistence and degradability	Propane-1,2-diol	Readily biodegradable in water
Bioaccumulative potential	Propane-1,2-diol	BCF=0.09
Mobility in soil	Propane-1,2-diol	Koc=2.9(20°C)
PBT/vPvB	Propane-1,2-diol	The substance is not PBT / vPvB

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Material Disposal

Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classifications and disposal methods in compliance with applicable regulations.

Container Disposal

Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Refer to Section 7 before handling the product or containers. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recovered or metal reclaimer.

Local Legislation

Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

14. TRANSPORT INFORMATION

Road and Rail Transport		Marine Transport		Air Transport	
UN. Number	Not Regulated	UN. Number	Not Regulated	UN. Number	Not Regulated
Class/Item	Not Regulated	Class/Item	Not Regulated	Class/Item	Not Regulated
Hazard Symbol	Not Regulated	Hazard Symbol	Not Regulated	Hazard Symbol	Not Regulated
Proper Shipping Name	Not Regulated	Proper Shipping Name	Not Regulated	Proper Shipping Name	Not Regulated
Packing Group	Not Regulated	Packing Group	Not Regulated	Packing Group	Not Regulated
		Marine Pollutant	No data available		

15. REGULATORY INFORMATION

International Chemical Inventory

Component	INECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS
Propane-1,2-diol	Listed	Listed d	Listed	Listed	Listed	Listed	Listed	Listed

16. OTHER INFORMATION

National Fire Protection Association (USA) : No data available

SDS Distribution : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty of guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Prepared By : Quality Control Department / Global Chemie ASCC Limited

Abbreviations:

ECS : European Inventory of Existing Commercial Chemical Substances.

TSCA: United States Toxic Substances Control Act Inventory.

DSL : Canadian Domestic Substances List.

IECSC : Inventory of Existing Chemical Substances in China

NZIoC : New Zealand Inventory of Chemicals.

PICCS : Philippines Inventory of Chemicals and Chemical Substances.

KECI : Korea Existing Chemicals Inventory

AICS: Australia Inventory of Chemical Substances.

Reference:

- Supplier Material Safety Data Sheets
- <http://chem.sis.nlm.nih.gov/chemidplus> (October 18)
- <http://hsis.ascc.gov.au/SearchHS.aspx> (October 18)
- Ecotoxicology data: http://cfpub.epa.gov/ecotox/quick_query.htm (October 18)
- IPCS - The International Chemical Safety Cards (ICSC), website:<http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestisstoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/> ABBREVIATIONS AND ACRONYMS
- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. No warranty and guarantee are expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product for further information, please contact Global Chemie ASCC Limited.