



SAFETY DATA SHEET

PROPYLENE GLYCOL

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: PROPYLENE GLYCOL

Recommended use: Chemical for industry.

Manufacturer/Supplier: **MODERN CHEMICAL Co.Ltd.**
82/80 Soi Eakamai 22 (Nuan-noi) Sukhumvit Road 63,
North Klong Ton, Wattana, Bangkok 10110

Telephone No: 0-2715-0897-9, 0-2392-3410-3

Fax No: 0-2715-0908-9, 0-2391-1571-2

Emergency Telephone No: 0-2715-0897-9, 0-2392-3410-3

2. HAZARDS IDENTIFICATION

Label elements

No Hazard Symbol required

Hazard statement(s):

Not classified as hazardous under GHS criteria.

Precautionary statement(s):

No precautionary phrases.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym: 1,2-Propanediol, MPG, PG

Ingredients	% (w/w)	CAS NO.
PROPYLENE GLYCOL	100	57-55-6

4. FIRST AID MEASURES

General advice: Not expected to be a health hazard when used under normal conditions.



Inhalation:	Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin contact:	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
Eye contact:	Flush eyes with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Use water spray, Alcohol-resistant foam, dry chemical powder, carbon dioxide sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

Do not use water in a jet.

Specific hazards arising from Chemicals:

Carbon dioxide. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Will only if enveloped in a pre-existing fire. Hazardous combustion products may include: Carbon monoxide.

Special protective equipment for fire-fighters:

Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Avoid inhaling vapour and/or mists. Avoid contact with the skin.

Extinguish any naked flames. Do not smoke. Remove ignition sources.

Avoid sparks.

Environmental precautions:

Avoid inhaling vapour and/or mists. Avoid contact with the skin.

Extinguish any naked flames. Do not smoke. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Use appropriate contaminated area thoroughly.



Methods and Material for Containment and Clean Up:

For large liquid spills (>1 drum), 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.

For small liquid spills (<1 drum), 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.

7. HANDLING AND STORAGE

Precautions for Safe Handling & Product Transfer:

In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. Use local exhaust extraction over processing area. For lines and fittings, avoid copper, copper alloys, zinc. Avoid contact with skin, eyes, and clothing. Air-dry contaminated clothing in a well-ventilated area before laundering. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Do not empty into drains. Handling Temperature: Ambient. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Lines should be purged with nitrogen before and after product transfer. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Keep containers closed when not in use.

Conditions for Safe Storage & Unsuitable Materials:

Prevent all contact with water and with moist atmosphere. Tanks must be clean, dry and rust-free. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Nitrogen blanket recommended for large tanks (capacity 100 m³ or higher). Drums should be stacked to a maximum of 3 high. Keep dry. Must be stored in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. Prevent ingress of water. Storage Temperature: 40 °C maximum.



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: None established.

Appropriate Engineering Controls: No exposure controls are ordinarily required under normal conditions of use. It is good general industrial hygiene practice to minimize exposure to the material.

Individual Protection Measures

Respiratory protection: No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.

Hand protection: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: Incidental contact/Splash protection: PVC. Neoprene rubber. Nitrile rubber. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Thin disposable gloves should be avoided for long term use. When worn, use once and dispose.

Eye protection: Chemical splash goggles (chemical monogoggles). Approved to EU Standard EN 166.

Skin and body protections: Skin protection not ordinarily required beyond standard issue work clothes.

Hygiene measures: No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form, Color and Odor : liquid, colorless, Odourless.	Evaporation rate : N/A
Melting Point : -59 °C	Specific gravity : N/A
pH : 7	Solubility in water : Completely miscible.



Boiling point : 186 - 189 °C	Viscosity : 55 mPa.s at 20 °C
Vapour pressure : 10 Pa at 20 °C	Vapour density : 2.5 g/l at 20 °C
Lower explosive limits : 2.6 %Vol	Upper explosive limits : 12.6 %Vol
Auto-ignition temperature : 421 °C	Flash point: 99 °C
Odour threshold: N/A	Flammability (solid, gas): N/A
Decomposition temperature: N/A	Solubility in other solvents: Readily soluble in various organic solvents.
n-octanol/water partition coefficient (log P_{ow}): -1	

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable. Hygroscopic.
Reactions:	Stable under normal conditions of use.
Possibility of Hazardous Reactions:	no data available.
Conditions to avoid:	Heat, flames, and sparks. Temperatures above 40 °C
Materials to avoid:	Strong oxidizing agents. Strong acids.
Hazardous decomposition products:	Carbonyl and dioxolane derivatives may be formed.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Low toxicity: LD50 Oral – >5,000 mg/kg Expected to be of low toxicity: LD50 Dermal – >5,000 mg/kg
Sensitization:	Not irritating to skin. Essentially non-irritating to eyes. Not. Expected to be a respiratory irritant. Not a skin sensitizer. Low systemic toxicity on repeated exposure. Cats given high doses of MPG in diet showed a decrease in red blood cell survival.
Chronic toxicity:	Not mutagenic. Not carcinogenic in animal studies. Not a developmental toxicant. Does not impair fertility.
Further toxicological information:	No data available.



12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish: Practically non toxic: LC/EC/IC50 >100 mg/l

Toxicity to daphnia and other aquatic invertebrates:

Practically non toxic: LC/EC/IC50 >100 mg/l

Toxicity to algae: Practically non toxic: LC/EC/IC50 >100 mg/l

Toxicity to Bacterial: Expected to be practically non toxic: LC/EC/IC50 >100 mg/l

Biodegradability Remarks: Readily biodegradable.

Bioaccumulative Potential: Not expected to bioaccumulate significantly.

Mobility: If product enters soil, it will be highly mobile and may contaminate groundwater.

Affected in any other way: No data available.

13. DISPOSAL CONSIDERATIONS

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 classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.

Container Disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Send to drum recovered or metal reclaimed.

14. TRANSPORT INFORMATION

ADR/RID

Not Regulated for Land Transport

IMDG

Not Regulated for Water Transport

IATA

Not Regulated for Air Transport



15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Chemical Inventory Status:

AICS	:	Listed	
DSL	:	Listed	
INV (CN)	:	Listed	
ENCS (JP)	:	Listed	(2)-234
ISHL (JP)	:	Listed	2-(8)-321
ISHL (JP)	:	Listed	2-(8)-323
TSCA	:	Listed	
EINECS	:	Listed	200-338-0
KECI (KR)	:	Listed	KE-29267
PICCS (PH)	:	Listed	
Other Information	:	Hazardous Substance Act.BE2535	

16. Other Information

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