



SAFETY DATA SHEET

GLYCERINE

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

Product name: GLYCERINE

Recommended use: Chemical for industrial.

Manufacturer/Supplier: MODERN CHEMICAL CO.,LTD.
82/80 Soi Ekamai 22 (Nuannoi), Sukhumvit 63,
Klong Tan Nuea, Watthana, 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:

None.

Hazard statement(s):

None.

Precautionary statement(s):

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym: 1,2,3-Propanetriol, Glycerol, Glyceritol, Glycic Alcohol, 1,2,3-Trihydroxypropane.

Ingredients	% (w/w)	CAS NO.
GLYCERINE	100	56-81-5

4. FIRST AID MEASURES

General advice: No data available.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.



- Skin contact:** Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
- Eye contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.
- Ingestion:** Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Use water spray, foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific hazards arising from Chemicals:

Carbon oxides, irritating and toxic fumes.

Special protective equipment for fire-fighters:

Wear protective breathing equipment and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Wear personal protective clothing and appropriate NIOSH approved respirator if mist or vapor is generated.

Environmental precautions:

Do not allow to enter drainage system, surface or ground water.

Methods and materials for containment and cleaning up:

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: Stop leak if without risk. If the product is in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liquid form: Do not get water inside container. Absorb with an inert material and put the spilled material in an appropriate waste disposal.



Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if need. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. HANDLING AND STORAGE

Precautions for safe handling & Product Transfer:

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Do not ingest. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Conditions for safe storage & Unsuitable Materials :

Keep in tightly closed container and store upright to prevent any run-out of product. Store in a cool, dry, well ventilated area, away from incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: TWA 10 mg/m³

Appropriate 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 and proximal to the workstation location.

Individual Protection Measures

Respiratory protection: If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type P95 or R95 filters) may be worn for up to ten times the exposure limit, or respirator supplier, whichever is lowest. Please note that N filter are not recommended for this material.

Hand protection: Suitable protective gloves.

Eye/face protection: Protective goggles or face shield with goggles.



Skin protection: Chemical boots and full protective clothing may be required.

Hygiene measure: No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form, Color and Odor : liquid, colourless, sweet	Evaporation rate : N/A
Melting Point : 18 - 19°C	Specific gravity : 1.260 g/cm ³ at 25 °C
pH : Neutral to litmus	Solubility in water : Soluble
Boiling point : 290 °C	Viscosity : 1300 mPa.s at 20 °C
Vapour pressure : 0.0025 mbar at 50 °C	Vapour density : 3.17 (Air=1)
Lower explosive limits : 0.9 %Vol	Upper explosive limits : N/A
Auto-ignition temperature : 370 - 400 °C	Flash Point: >198.9 °C
Odour threshold : N/A	Flammability (solid, gas): N/A
Decomposition temperature : 204 °C	n-octanol/water partition coefficient (log P_{ow}): N/A
Solubility in other solvents: Miscible in cold water and alcohol. Partially soluble in acetone. Very slightly soluble in diethyl ether (ethyl ether). Limited solubility in ethyl acetate.	

10. STABILITY AND REACTIVITY

Chemical stability: Stable under ordinary conditions of use and storage.

Reactions: No data available.

Possibility of hazardous reactions: Glycerin may react violently with acetic anhydride, aniline and nitrobenzene, chromic oxide, lead oxide and fluorine, phosphorous triiodide, ethylene oxide and heat, silver perchlorate, sodium peroxide, sodium hydride. Polymerization : Will not occur.

Conditions to avoid: Avoid contact with incompatible materials, excess heat and ignition sources, moisture. No decomposition if used according to specification.

Materials to avoid: Strong oxidizing agents such as Nitric acid or other strong acids, chromium trioxide, potassium chlorate, or potassium permanganate.

Hazardous decomposition products: Dose not decompose up to 204°C (400 F) thermal decomposition may release acrolein.



11. TOXICOLOGICAL INFORMATION

Acute toxicity:	LD50 (Oral, mouse): 4090 mg/kg LD50 (Dermal, rabbit): 10000 mg/kg LC50 (Inhalation, rat): >570 mg/m ³ - 1h
Sensitization:	After inhaled: Due to low vapor pressure, inhalation of the vapors at room temperature is unlikely. Inhalation of mist may cause respiratory tract irritation. After swallowed: Low hazard. Low toxicity except with very large doses. When large doses are ingested, it can cause gastrointestinal tract irritation with thirst (dehydration), nausea or vomiting diarrhea. It may also affect behavior/central nervous system/nervous system (central nervous system depression, general anesthetic, headache, dizziness, confusion, insomnia, toxic psychosis, muscle weakness, paralysisconvulsions). Urinary system/kidneys (renal failure, hemoglobinuria), cardiovascular system (cardiac arrhythmias), liver. It may also cause elevated blood sugar. After contact to skin: May cause skin irritation. May be absorbed through skin. After contact to eye: May cause eye irritation with sitinging, redness, burning sensation, and tearing, but no eye injury.
Chronic toxicity:	Ingestion: Prolonged or repeated ingestion may affect the blood (hemolysis, change in white blood cell count), endocrine system (changes in adrenal weight), respiratory system, and may cause kidney injury.

Further toxicological information: No data available.

12. ECOLOGICAL INFORMATION

Toxicity:	
Toxicity to fish	LC50 - Fish : 58.5 ppm - 96h
Toxicity to daphnia and other aquatic invertebrates:	No data available
Toxicity to algae	No data available.
Toxicity to bacteria	No data available.
Biodegradability Remarks:	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. Rapidly degradable.
Bioaccumulative Potential:	This product is not expected to bio-accumulate.



Mobility: This product does not mobility into the soil.

Affected in any other way: No data available.

13. DISPOSAL CONSIDERATIONS

Material Disposal: Disposal is to be performed in compliance with all Federal, State/Provincial and local regulations. Do not dispose into sinks, drains or into the immediate environment.

Container Disposal: No data available.

14. TRANSPORT INFORMATION

ADR/ADNR

Not dangerous goods

IMGD

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

Observe normal safety regulations when handling chemicals. Not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials

Illinois toxic substances disclosure to employee act: Glycerin

Federal and State Regulations:

Rhode Island RTK hazardous substances: Glycerin

Pennsylvania RTK: Glycerin

Minnesota: Glycerin

Massachusetts RTK: Glycerin

Tennessee - Hazardous Right to Know: Glycerin

TSCA 8(b) inventory: Glycerin

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.



Other Classifications:

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

DSCL (EEC):

Not available

S24/25- Avoid contact with skin and eyes.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: g

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

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Safety glasses.

16. OTHER INFORMATION

Modern Chemical Co.,Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensive or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the



บริษัท โมเดิร์นเคมีเคิล จำกัด (สำนักงานใหญ่)

(MODERN CHEMICAL CO.,LTD. (Head Office))

82/80 ซอยเอกมัย 22(นวน้อย) ต.สุขุมวิท 63 แขวงคลองตันเหนือ เขตวัฒนา กรุงเทพมหานคร 10110 โทร0-2715-0897-9 แฟกซ์.0-2392-3410-3

82/80 Soi Eakmai 22(nuan-noi) 63 Sukhumvit Rd, Klong Ton Nuea, Wattana, Bangkok 10110 E-mail : service@modernchemical.co.th

information must exercise their independent judgment in determining its appropriateness for a particular purpose.

MODERN CHEMICAL CO., LTD. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MODERN CHEMICAL CO.,LTD.

Modernchemical co.,Ltd.