

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: Mono Ethylene Glycol (M.E.G.)
Product Description: Mono Ethylene Glycol
Chemical Formula: HOCH₂CH₂OH
Recommended Use: Manufacture of substances

COMPANY IDENTIFICATION

Supplier: UNION PETROCHEMICAL PUBLIC COMPANY LIMITED
728 Union House Building, Baromratchonnani Rd.,
Bangbumru, Bangplad, Bangkok 10700
Supplier General Contact: +662 881 8288

This (M)SDS is a generic document with no country specific information included.

SECTION 2 HAZARDS IDENTIFICATION

This material is hazardous according to UN GHS Criteria. Classification includes all GHS hazard classes. For hazard categories with two cut-off/concentration limits, classification was based on the higher limit.

GHS CLASSIFICATION:

Oral Toxicity: Category 4
Skin irritation: Category 2A.

GHS LABEL ELEMENTS:

Pictogram:



Signal Word: Warning

Hazard Statements:

Health: H302: Harmful if swallowed.

Precautionary Statements:

Prevention: P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product.

Response: P301 + P312: IF SWALLOWED: Call for doctor/Physician if you feel unwell. P330: Rinse your mouth.

Storage: P403 + P235: Store in a well-ventilated place. Keep cool. P233: Keep container tightly closed. P210: Keep away from ignition source.

Disposal: P501: Dispose of contents and container in accordance with local regulations.

Contains: N/A

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS

Material can irritate to eye and skin.



HEALTH HAZARDS

May be irritating to the eyes, nose, throat, and lungs. Repeated exposure may cause skin dryness or cracking. May cause central nervous system depression. If swallowed, may be aspirated and cause lung damage.

ENVIRONMENTAL HAZARDS

Evaluation number (FRG) (mammal): 1.0 ; Evaluation number (FRG) (bacteria): 2.0 ; Evaluation number (FRG) (fish): 2.0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a substance.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
MONO ETHYLENE GLYCOL	107-21-1	100%	H302

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4 FIRST AID MEASURES

INHALATION

IF INHALED: Remove victim to fresh air. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. If breathing is difficult, give patient oxygen. Get medical attention.

SKIN CONTACT

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

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 assistance immediately.

INGESTION

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: -

FIRE FIGHTING

Fire Fighting Instructions: Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Keep away from ignition source.

FLAMMABILITY PROPERTIES

Flash Point : 111°C (Close up)

Flammable Limits (Approximate volume % in air): LEL: 1.8 UEL: 12.8

Autoignition Temperature: 410°C

SECTION 6

ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

Do not breathe fume or aerosol. Wear protective equipment. Keep unprotected person away.

PROTECTIVE EQUIPMENT

Wear a self-contained breathing apparatus and protective clothing. To prevent contact with skin and eyes.
Wear safety footwear.

SPILL MANAGEMENT

Large Spill: -

Small Spill: Absorb with liquid-binding material (sand, Diatomite, acid bind, universal binders, sawdust).

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground or soil. For cleaning up, dispose of contaminated material as waste should be according to item 13.

SECTION 7

HANDLING AND STORAGE

HANDLING

Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation or exhausting at the workplace.

Loading/Unloading Temperature: N/D

Transport Temperature: N/D

Transport Pressure: N/D

Static Accumulator: N/D

STORAGE

Storage containers should have good ventilation and keep away from ignition source.

Storage Temperature: N/D

Storage Pressure: N/D

Suitable Materials and Coatings (Chemical Compatibility): No special requirement for incompatible chemicals condition.

Unsuitable Materials and Coatings: No special requirement for incompatible chemicals condition.



SECTION 8	EXPOSURE CONTROLS / PERSONAL PROTECTION
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Control parameters/Exposure limits:

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source
-	-	-	-	-	-	-

Biological limits

Substance	Specimen	Sampling Time	Limit	Determinant	Source
-	-	-	-	-	-

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator Type A filter material.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/ vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical-resistant gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves.

Eye Protection: Chemical goggles are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Color: Colorless
Odour: Odorless
Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 20°C): 1.1154 [With respect to water] [Calculated]
Density : 1115.4 kg/m³ (1.1 kg/dm³)
Flammability (Solid, Gas): N/D
Flash Point: 111°C (Close up)
Flammable Limits (Approximate volume % in air): LEL: 1.8 UEL: 12.8
Autoignition Temperature: 410°C
Boiling Point / Range: 198°C
Decomposition Temperature: N/D
Vapour Density (Air = 1): 2.14
Vapour Pressure: 0.01 kPa (0.08 mm Hg) at 20°C
Evaporation Rate (n-butyl acetate = 1): N/D
pH: 5-8
Log Pow (n-Octanol/Water Partition Coefficient): -1.36
Solubility in Water: completely miscible soluble
Viscosity: N/D

OTHER INFORMATION

Freezing Point: -12°C
Melting Point: -12°C
Molecular Weight: 62.07 G/MOLE [Calculated]
Hygroscopic: N/D
Coefficient of Thermal Expansion: N/D

SECTION 10	STABILITY AND REACTIVITY
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STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid heat and humidity.

MATERIALS TO AVOID: Aluminium, Hydroxide of alkaline, Perchloric acid and Oxidize.

HAZARDOUS DECOMPOSITION PRODUCTS: Material is not decomposition under normal conditions

POSSIBILITY OF HAZARDOUS REACTIONS: N/D

SECTION 11	TOXICOLOGICAL INFORMATION
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INFORMATION ON TOXICOLOGICAL EFFECTS

<u>Route of Exposure</u>	<u>Conclusion/Remarks</u>
Inhalation	
Toxicity: No end point data.	Minimally Toxic.
Irritation: No end point data.	May be irritating to the respiratory tract. The effects are reversible.



<u>Route of Exposure</u>	<u>Conclusion/Remarks</u>
Ingestion	
Toxicity (Rat): LD50 > 4700 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 10626 mg/kg	Minimally Toxic. Based on test data for the material.
Irritation: Data available.	May dry the skin leading to discomfort and dermatitis. Based on test data for structurally similar materials.
Eye	
Irritation: Data available.	Irritating and will injure eye tissue. Based on test data for the material.

OTHER HEALTH EFFECTS FROM SHORT AND LONG TERM EXPOSURE

Anticipated the skin and eyes irritation but no health effects from carcinogenicity and mutagenicity since it is not related to substances that cause cancer and mutations.

For the product itself:

Vapor concentration above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness.

IARC Classification:

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = IARC 1

2 = IARC 2A

3 = IARC 2B

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material – Expected to be harmful to aquatic organisms.

Material – Not expected to be toxicity to crustaceans and algae.

MOBILITY

Material – N/D

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material – Expected to be readily biodegradable.

Hydrolysis:

Material – Transformation due to hydrolysis not expected to be significant.

Photolysis:

Material – Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:

Material – Expected to degrade at a moderate rate in air.

ECOLOGICAL DATA

Ecotoxicity

Test	Duration	Organism Type	Test Results
Aquatic – Acute Toxicity	96 hour(s)	Oncorhynchus mykiss	LC50 18500 mg/l

Persistence, Degradability and Bioaccumulation Potential

Media	Test Type	Duration	Test Results
Fish	Aquatic – Acute Toxicity	96 hour(s)	LC50 100 mg/l



SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Dispose of contaminated material as waste must be in accordance with current applicable laws and regulations.

SECTION 14 TRANSPORT INFORMATION

LAND – Precautionary Transportation Measures & Conditions:

NOTE: Comply with applicable laws and regulations.

Proper Shipping Name: None
Hazard Class & Division: None
EMS Number: -
UN Number: -
Packing Group: -
Marine Pollutant: None
Label(s): -
Transport Document Name: -

SECTION 15 REGULATORY INFORMATION

ANNEX I: 603-027-00-1

This material is hazardous according to Safe Work Australia: HAZARDOUS CHEMICAL.

Acute Oral Toxicity -Category 4

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H302: Harmful if swallowed and enters airways; Aspiration, Cat 4

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