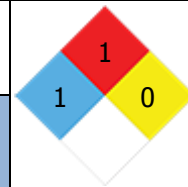




# Safety Data Sheet

## Monoethylene Glycol



Code 10170088

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### 1 Identification of the substance or mixture and of the supplier

#### 1.1. Product name or GHS product identifier

1.1.1. Common name :	Monoethylene Glycol
1.1.2. Chemical formula :	C2H6O2
1.1.3. Commercial name :	Monoethylene Glycol; MEG
1.1.4. CAS number :	107-21-1
1.1.5. Molecular weight :	62.07 g/mol

#### 1.2. Other product identifier :

1.2.1. UN Number :	N/A
1.2.2. Annex I, EU directive 67/948/EC :	
1.2.3. EC number :	203-473-3

#### 1.3. Recommendation for use and other prohibitions for use

Harmful if swallowed.  
Causes skin irritation.

#### 1.4. Manufacturer or Supplier Details

1.4.1. Manufacturer or Supplier	1.4.2. Address
PTT Global Chemical Public Company Limited	9, Soi G-9, Pakorn Songkhraorat Road ,Map Ta Phut , Muang Rayong, Rayong 21150, Thailand
1.4.3. Telephone number :	038643972
1.5. Emergency telephone number :	(+66)-38-997-004

#### 1.6. Other information

1.6.1. Hazardous substance	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1.6.2. Hazardous category	N/A	
1.6.3. Max quantity storage	22400	

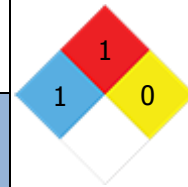
#### 1.6.4. Uses

#### 1.6.5. Other



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2

### Hazards identification

2.1. GHS classification of the substance/mixture and any national or regional information

2.1.1. Hazard classification according to the GHS

Acute Toxicity: Oral - Category 4

2.2. GHS label elements, including precautionary statements

2.2.1. Chemical name :

Ethylene glycol

2.2.2. Product name or GHS product identifier :

Monoethylene Glycol

2.2.3. Symbol and Hazard pictograms



2.2.4. Signal words :

Warning

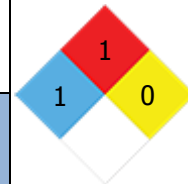
2.2.5. Hazard statement

Harmful if swallowed



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### Hazards identification (cont.)

#### 2.2.6. Precautionary information

- Flush with fresh water if contact with skin or eyes
- If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label
- If swallowed, rinse mouth with water (only if the person is conscious)

#### 2.2.7. Supplemental information

#### 2.3. Other hazards which do not result in classification or are not covered by the GHS

##### 2.3.1. Potential Chronic Health Effects

###### 2.3.1.1. Carcinogen effects

- |  |                                  |                                      |                                      |
|--|----------------------------------|--------------------------------------|--------------------------------------|
| <input type="radio"/> Maybe-Carcinogen | <input type="radio"/> Carcinogen | <input type="radio"/> Non-Carcinogen | <input checked="" type="radio"/> N/A |
|--|----------------------------------|--------------------------------------|--------------------------------------|

###### 2.3.1.2. Mutagenic effects

- |                                 |                                     |                                      |
|---------------------------------|-------------------------------------|--------------------------------------|
| <input type="radio"/> Mutagenic | <input type="radio"/> Non-Mutagenic | <input checked="" type="radio"/> N/A |
|---------------------------------|-------------------------------------|--------------------------------------|

###### 2.3.1.3. Other information

N/A

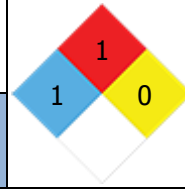
#### 2.4. Environmental Hazards

N/A



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## Monoethylene Glycol



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### Composition / information on ingredients

#### 3.1. Homogeneous substance

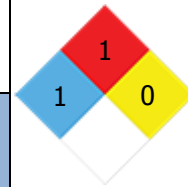
3.1.1. Chemical identity :	Ethylene Glycol
3.1.2. Common name :	Monoethylene Glycol
3.1.3. Synonym :	1,2 Dihydroxyethane, 1,2-Ethandiol
3.1.4. CAS number and other unique identifiers :	107-21-1

#### 3.1.5. Impurities and stabilizing additives



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# Monoethylene Glycol



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## 4

### First-aid measures

#### 4.1. First-aid

##### 4.1.1. Inhalation

If breathed in, move the person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### 4.1.2. Skin contact

Wash off with soap and plenty of water. Consult a physician.

##### 4.1.3. Eyes contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### 4.1.4. Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2. Most important symptoms/effects

##### 4.2.1. Acute Effects

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

##### 4.2.2. Delayed effects

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

#### 4.3. Indication of immediate medical attention

No further relevant information available.

#### 4.4. Special treatment needed, if necessary.

No further relevant information available.

#### 4.5. Other

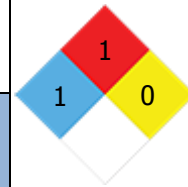
##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.



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### 5

### Firefighting measures

- 5.1. Unsuitable extinguishing media : N/A
- 5.2. Suitable extinguishing media : Use water spray, Alcohol-resistant foam, Dry chemical or Carbon dioxide.
- 5.3. Specific hazards arising from the chemical.  
No data available
- 5.4. Special protective equipment and precautions for fire-fighters.
- 5.5. Precautions for fire fighters.  
Wear self-contained breathing apparatus for fire fighting if necessary.
- 5.6. Other.

### 6

### Accidental release measures

#### 6.1. Personal precautions

#### 6.2. Protective equipment



#### 6.3. Emergency procedures

- |  |  |
|--|--|
| 6.3.1. Large Spill<br>Eliminate sources of ignition. Stop leak if you can do it without risk. Prevent entry into waterways. Dike and pump into properly containers for disposal. | 6.3.2. Small Spill<br>Soak up with absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. |
|--|--|

#### 6.4. Environmental precautions

Prevent entry into waterways.

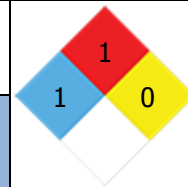
#### 6.5. Methods and materials for containment and cleaning up.

Eliminate sources of ignition. Stop leak if you can do it without risk. Prevent entry into waterways. Dike and pump into properly containers for disposal or Soak up with absorbent material and dispose of as hazardous waste.



# Safety Data Sheet

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### 7

### Handling and storage

#### 7.1. Precautions for safe handling.

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.  
 For precautions see section 2.

#### 7.2. Incompatibility.

##### 7.2.1. Safe storage condition.

Keep the container tightly closed in a dry and well-ventilated place.  
 Hygroscopic.

##### 7.2.2. Incompatible chemicals condition.

#### 7.3. Storage area :

Process area and Truck Loading

#### 7.4. Incompatible chemicals condition.

Keep the container tightly closed in a dry and well-ventilated place.  
 Hygroscopic.

#### 7.5. Hazard Class by UN :

#### 7.6. Classification :

### 8

### Exposure controls/personal protection

#### 8.1. Occupational exposure limit values or biological limit values

Name	TLV-TWA	TLV-STEL	TLV-C	PEL	IDLH	Thai	biological limit values
Monoethylene Glycol	100 mg/m <sup>3</sup>						

#### 8.2. Appropriate engineering controls

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

#### 8.3. Personal protective equipment



#### 8.4. Personal hygiene

The usual precautionary measures should be adhered to in handling the chemicals.  
 Keep away from foodstuffs, beverages and food.

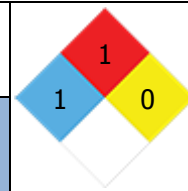
#### 8.5. Other protection

Wash hands during breaks and at the end of work.



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### 9

### Physical and chemical properties

9.1. Appearance :	Liquid Colorless		
9.2. Odour :	Sweetish		
9.3. Odour threshold limit :	- ppm		
9.4. pH-value :	7 neutral		
9.5. Melting point &Freezing point :	Melting point	-12 °C	
	Freezing point	- °C	
9.6. Initial boiling point/Boiling range	Boiling/condensation point	198 °C	
	Evaporation rate	- °C -- °C	
9.7. Flash point :	111 °C (Close cup)		
9.8. Evaporation rate :	1 mg/sec		
9.9. Flammability (solid, gas) :	Burning time	- sec	
	Burning Rate	- mm/sec	
9.10. Upper/lower flammability or explosive limits :	1.8 % LEL and/or 12.8 %UEL		
9.11. Vapour pressure :	0.01 kPa at 20 °C		
9.12. Vapour density :	Respect to air	2.14 kPa	
9.13. Relative density :	1.113 g/cm <sup>3</sup> at 25 °C		
9.14. Solubility(ies) :	Soluble		
9.15. Partition coefficient : n-octanol/water :	-1.36		
9.16. Auto-ignition temperature :	410 °C		
9.17. Decomposition temperature :	- °C		
9.18. Viscosity :	-		
9.19. Heat of Combustion :	- °C		
9.20. The ignition distance test :	- cm		
9.21. The enclosed space ignition test	- s/m <sup>3</sup>		
9.22. The foam test :	Vapor density	-	cm
	Flames burning up	-	sec

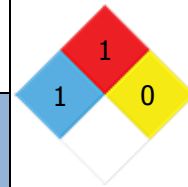
Detail	Type of Substance		Unit
	Other substance	Powders or dusts	
Use water spray to blanket fire, cool fire exposed containers, to stop leak, and burn	-	-	minute
Burning time	-	-	sec
Burning rate	-	-	mm/s





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**10****Stability and reactivity**

## 10.1. Reactivity

Form explosive gas mixture with air.  
Reacts with strong oxidizing agents.

## 10.2. Chemical Stability :

- Stability       Instability and emit gas       N/A

## 10.3. Possibility of Hazardous reaction :

Hazardous polymerization will not occur. The product is stable.

## 10.4. Conditions to avoid :

Excess Heat, Strong oxidizer, Open flames.

## 10.5. Incompatible materials :

Aluminium, chromyl chloride, alkali hydroxides, perchloric acid, strong oxidizing agents, strong acids, strong bases, aldehydes.

## 10.6. Hazardous decomposition products :

Carbon Monoxide and Carbon dioxide.

## 10.7. Corrosively :

-

**11****Toxicological information**

11.1. Route of Exposure     Inhalation     Ingestion     Skin contact     Eye contact

## 11.2. Symptoms related to the physical, chemical and toxicological characteristics

## 11.2.1. Symptom related with physical characteristic

Irritation

## 11.2.2. Symptom related with chemical characteristic

Fatigue, Abnormal movements, Unconsciousness, Kidney damage

## 11.2.3. Symptom related with toxicology

Target organs: Central nervous system, Kidney Cardiovascular system, Liver

## 11. The impact of acute and delayed (delayed and immediate effects) including chronic (chronic effects) exposure (Contact delayed, immediate and chronic effects)

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11 The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

## 11.4. Numerical measures of toxicity

11.4.1. Acute oral toxicity :      LD50: 4700 mg/kg(Rat)

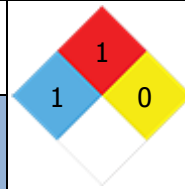
11.4.2. Acute dermal toxicity :      LD50: 10,626 mg/kg(Rabbit)

11.4.3. Acute toxic of the vapour :



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### 12

#### Ecological information

12.1. Eco toxicity (aquatic and terrestrial, where available)

12.1.1. Toxicity to fish : LC50-Rainbow trout 18,500 mg/l,96 hr.exposure

12.1.2. Crustaceans / Toxicity to crustaceans : N/A

12.1.3. Algae / Toxicity to algae : N/A

12.2. Degradability and persistence

Rapidly degradable: 90 - 100%

Testing period: 10 d

12.3. Bio-accumulative potential : This material is not expected to bioaccumulate.

12.4. Mobility in soil : N/A

12.5. Other adverse effects :

N/A

### 13

#### Disposal considerations

13.1. Waste information : N/A

13.2. Remain materials : N/A

13.3. Waste disposal : Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated lik

13.4. Package contaminated disposal : Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for

### 14

#### Transport information

14.1. UN Number : N/A

14.2. UN Proper Shipping Name :

14.3. Transport Class/Division :

14.4. Package group (if any) :

14.5. Marine pollution :  Yes  No  N/A

14.6. Special precautionary for user :

14.7. Transport in bulk :

14.8. Classification code :

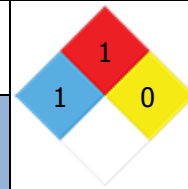
14.9. Other :

Pictogram



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### 15

#### Regulatory information

15.1. Safety, health and environmental regulations

-

### 16

#### Other information

16.1. Date of latest issue

7/3/2024

16.2. Description of point of Safety Data Sheet changing

-

16.3. Abbreviation explanation

-

NFPA Hazard Code	HMIS Hazard	Rating System
Hazardous decomposition products  Health hazard Possibility of hazardous reactions Specific hazards arising from the chemical	1 Health	0 = No hazard 1 = Slight hazard 2 = Moderate hazard 3 = Serious hazard 4 = Severe hazard
	1 Flammability	
	0 Reactivity	

16.4. Information Safety Data Sheet files

Primary Reference :

Secondary Reference :

16.5. Local Legislation Related

-

16.6. Reference

-

16.7. Other details

-

# Monoethylene Glycol

## NFPA Rating



UN Number : N/A

CAS Number : 107-21-1

Flash point : 111°C

Auto-ignition : 410°C

TWA-TLV : 100 mg/m<sup>3</sup>

Classification :



## Hazard Statement

## Emergency Call

(+66)-38-997-004



## Health Effects

Eyes, Dermal contact: Irritation.  
Digestive system: Harmful.  
Target Organ: Central Nervous System, Kidney, Liver

## Protective equipment

Wear protective suit. Wear safety glasses. Wear safety gloves. Wear safety shoes.



## first aid

- If breathed in, move the person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- Eyes or dermal contact, rinse thoroughly for at least 15 minutes.
- If ingest rinse mouth with water. Consult a physician.



## Unsuitable extinguishing media

CO<sub>2</sub>, Extinguishing Powder or Water Jet.



## Hazardous Materials Handling and Storage

Keep container tightly sealed.  
Store in cool, dry conditions.  
Protect from humidity and keep away from water.



## Methods and materials for containment and cleaning up

Eliminate sources of ignition. Stop leak if you can do it without risk. Prevent entry into waterways. Dike and pump into proper containers for disposal or Soak up with absorbent material and dispose of as hazardous waste.

For more information please contact :

038-994-000

Code No. 10170088

Number of Revision :

2

Warning :

Do not handle with out proper personal protective equipment.

# Monoethylene Glycol

UN No : N/A

CAS No : 107-21-1



Signal words : Warning

## Hazard statement :

## Precautionary information :

- Flush with fresh water if contact with skin or eyes
- If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label
- If swallowed, rinse mouth with water (only if the person is conscious)

## Manufacturer or Supplier Details

Company : PTT Global Chemical Public Company Limited

Address : 9, Soi G-9, Pakorn Songkhraorat Road ,Map Ta Phut ,  
Muang Rayong, Rayong 21150, Thailand

Telephone number : 038643972



## First Aid :

- If breathed in, move the person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- Eyes or dermal contact, rinse thoroughly for at least 15 minutes.
- If ingest rinse mouth with water. Consult a physician.

## Emergency number :

**(+66)-38-997-004**

## Protective equipment

