MONOETHYLENE GLYCOL	**MATERIAL SAFETY DATA SHEET** According to regulation (EU)no.1907/2006	PS
Revision : 01	Date : October 14th, 2022	MSDS Number : 018

Section 1 - Chemical Product and Company Identification

1.1 Product Name : **MONOETHYLENE GLYCOL**
Synonyms : 1,2-Dihydroxyethane; 1,2-Ethanediol;1,2-Ethandiol; Ethylene dihydrate; Glycol alcohol; MonoMONOETHYLENE GLYCOL; Tescol
CAS No. : 107-21-1
HS Code : 2905 31 00
Molecular Weight : 62.07 g/mol
Chemical Formula : $HOCH_2CH_2OH$ $C_2H_6O_2$ Hill
Brand : PANCASAKTI
1.2 Manufacturer : **PT. Pancasakti Putra Kencana**
Address : Ruko Boulevard TamanTekno Blok E No.9 - 11BSD Serpong, Tangerang - Indonesia
Website : www.pancasakti.co.id
Email : sales@pancasakti.co.id
For information :Telp: +62-21- 7588 0205(Hunting) , fax:+62-21-7588 0198
1.3 Application : Industrial solvent
Emergency Telephone: +62-21-7588 0205(Hunting)

Section 2 - Hazards Identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Specific target organ toxicity - repeated exposure, Oral (Category 2), Kidney, H373

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word	Warning
Hazard statement(s)	
H302	Harmful if swallowed.
H373	May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.
Precautionary statement(s)	
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Supplemental Hazard Statements
EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3 - Composition, Information on Ingredients

3.1 Substances

Synonyms : 1,2-Ethandiol; Glycol alcohol; MonoMONOETHYLENE GLYCOL;
Formula : $HOCH_2CH_2OH$ $C_2H_6O_2$ Hill
Molecular weight : 62.07 g/mol
CAS-No. : 107-21-1
EC-No. : 203-473-3
Index-No. : 603-027-00-1

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
MONOETHYLENE GLYCOL CAS-No. . 107-21-1 EC-No. 203-473-3 Index-No 603-027-00-1	Acute Tox. 4; STOT RE 2; H302, H373	<=100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4 - First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

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

In case of skin contact

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

In case of eye contact

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

If swallowed

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

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

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

6.4 Reference to other sections

For disposal see section 13.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Hygroscopic. Storage class (TRGS 510): Combustible liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8 - Exposure Controls, Personal Protection

8.1 Control parameters

8.2 Exposure controls

Appropriat engineering controls

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

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740, Size M)

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9 - Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Form: liquid Colour: colourless
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezingpoint	Melting point/range: -13 °C
Initial boiling point and boiling range	196 - 198 °C
Flash point	111 °C - closed cup

Evaporation rate	1
Flammability (solid, gas)	No data available
Upper/lower flammability or	Upper explosion limit: 15.3 %(V)
	Lower explosion limit: 3.2 %(V)
explosive limits	No data available
Vapour pressure	0.08 mmHg at 20 °C
Vapour density	2.14 - (Air = 1.0)
Relative density	1.113 g/mL at 25 °C
Water solubility	completely miscible soluble
Partition coefficient: noctanol/water	log Pow: -1.36
Auto-ignition temperature	Auto-flammability
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information

Relative vapour density	2.14 - (Air = 1.0)

Section 10 - Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong acids, Strong oxidizing agents, Strong bases, Aldehydes, Aluminum

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 4,700 mg/kg(MONOETHYLENE GLYCOL)
LD50 Dermal - Rabbit - 10,626 mg/kg(MONOETHYLENE GLYCOL)

Skin corrosion/irritation

Skin - Rabbit(MONOETHYLENE GLYCOL)
Result: No skin irritation

Serious eye damage/eye irritation
Eyes - Rabbit(MONOETHYLENE GLYCOL)
Result: Mild eye irritation - 24 h

Respiratory or skin sensitisation
No data available(MONOETHYLENE GLYCOL)

Germ cell mutagenicity
No data available

Carcinogenicity
This product is or contains a component that is probably not carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.(MONOETHYLENE GLYCOL) (MONOETHYLENE GLYCOL)
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
Laboratory experiments have shown teratogenic effects.(MONOETHYLENE GLYCOL) Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.(MONOETHYLENE GLYCOL)

Specific target organ toxicity - single exposure
No data available(MONOETHYLENE GLYCOL)

Specific target organ toxicity - repeated exposure
Oral - May cause damage to organs through prolonged or repeated exposure. - Kidney

Aspiration hazard
No data available(MONOETHYLENE GLYCOL)

Additional Information
RTECS: KW2975000
When ingested early symptoms mimic alcohol inebriation and are followed by tenderness, respiratory failure, convulsions, cardiovascular collapse, pu acidosis. Without treatment, death may occur in 8 to 24 hours. Victims wh renal failure along with brain and liver damage., Exposure to and/or consumption of alcohol may increase toxic effects.(MONOETHYLENE GLYCOL) Central nervous system - Irregularities - Based on Human Evidence(MONOETHYLENE GLYCOL)

Section 12 - Ecological Information

12.1 Toxicity

Toxicity to fish
LC50 - Oncorhynchus mykiss (rainbow trout) - 18,500 mg/l - 96 h(MONOETHYLENE GLYCOL)
LC50 - Leuciscus idus (Golden orfe) - > 10,000 mg/l - 48 h(MONOETHYLENE GLYCOL)
NOEC - Pimephales promelas (fathead minnow) - 32,000 mg/l - 7 d(MONOETHYLENE GLYCOL)
NOEC - Pimephales promelas (fathead minnow) - 39,140 mg/l - 96 h(MONOETHYLENE GLYCOL)

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 74,000 mg/l - 24 h(MONOETHYLENE GLYCOL)
NOEC - Daphnia (water flea) - 24,000 mg/l - 48 h(MONOETHYLENE GLYCOL)
LC50 - Daphnia magna (Water flea) - 41,000 mg/l - 48 h(MONOETHYLENE GLYCOL)

Toxicity to algae
EC50 - Algae - 4,300.00 mg/l - 24 h(Ethyl acetate)

EC50 - SELENASTRUM - 1,800.00 - 3,200.00 mg/l - 72 h(Ethyl acetate)

12.2 Persistence and degradability

No data available
Ratio BOD/ThBOD 0.78 %(MONOETHYLENE GLYCOL)

12.3 Bioaccumulative potential

Does not bioaccumulate.
Bioaccumulation
other fish - 61 d - 50 mg/l(MONOETHYLENE GLYCOL)
Bioconcentration factor (BCF): 0.60

12.4 Mobility in soil

No data available(MONOETHYLENE GLYCOL)

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

Further information

No data available

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

Section 16 - Additional Information

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

HMIS (U.S.A.):
Health Hazard: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection: c

National Fire Protection Association (U.S.A.):
Health: 1
Flammability: 1
Reactivity: 0

Revision history :

Date	Rev	Description
21 August 19	00	-
14 Octo 22	01	thorough revision

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. PT. Pancasakti Putra Kencana Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.