

# SAFETY DATA SHEET

## Monoethylene Glycol

### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME Monoethylene Glycol

SYNONYMS, TRADE NAMES AL2O, , Ethylene Glycol, , Ethane-1, 2-diol, , MEG,

### 2 HAZARDS IDENTIFICATION

Harmful if swallowed.

CLASSIFICATION Xn;R22.

### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Name EC No. CAS-No. Content Classification

ETHANEDIOL 203-473-3 107-21-1 50-100% Xn;R22

The Full Text for all R-Phrases are Displayed in Section 16

### 4 FIRST-AID MEASURES

INHALATION

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

INGESTION

Provide rest, warmth and fresh air. Immediately rinse mouth and drink plenty of water (200-300 ml). Get medical attention.

SKIN CONTACT

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

EYE CONTACT

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention promptly if symptoms occur after washing.

### 5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

SPECIFIC HAZARDS

Oxides of: Carbon.

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

### 6 ACCIDENTAL RELEASE MEASURES

2 / 4

REVISION DATE: 21st December 2007

## Monoethylene Glycol

PERSONAL PRECAUTIONS

Follow precautions for safe handling described in this safety data sheet. Wear protective gloves. Avoid contact with skin and eyes.

Provide adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

SPILL CLEAN UP METHODS

Absorb with inert, damp, non-combustible material, then flush area with water. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

### 7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Avoid spilling, skin and eye contact. Avoid inhalation of vapours and spray mists. Provide good ventilation.

STORAGE PRECAUTIONS

Keep containers tightly closed. Keep in original container.

STORAGE CLASS

Chemical storage.

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name Std LT - ppm LT - mg/m<sup>3</sup> ST - ppm ST - mg/m<sup>3</sup>

ETHANEDIOL WEL 52 mg/m<sup>3</sup>(Sk) 104 mg/m<sup>3</sup>(Sk)

PROTECTIVE EQUIPMENT

RESPIRATORY EQUIPMENT

If ventilation is insufficient, suitable respiratory protection must be provided.

HAND PROTECTION

Use protective gloves.

EYE PROTECTION

Wear approved safety goggles.

OTHER PROTECTION

Wear rubber apron. Wear rubber footwear.

### 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Clear liquid

COLOUR Colourless

ODOUR Mild  
SOLUBILITY Soluble in water.  
BOILING POINT (°C) 198 MELTING POINT (°C) -13  
RELATIVE DENSITY 1.115 VAPOUR PRESSURE <10 Pa 20  
FLASH POINT (°C) 116 CC (Closed cup). AUTO IGNITION  
TEMPERATURE (°C)  
400  
PARTITION COEFFICIENT  
(N-Octanol/Water)  
-1.36

## 10 STABILITY AND REACTIVITY

### STABILITY

Stable under normal temperature conditions and recommended use.

3 / 4

REVISION DATE: 21st December 2007

## Monoethylene Glycol

### CONDITIONS TO AVOID

Avoid excessive heat for prolonged periods of time.

### MATERIALS TO AVOID

Strong oxidising substances.

### HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of: Carbon.

## 11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 >5000 mg/kg (oral rat)

### INHALATION

Vapour may irritate respiratory system or lungs.

### INGESTION

Harmful if swallowed.

### SKIN CONTACT

Irritating to skin.

### EYE CONTACT

Irritating to eyes.

## 12 ECOLOGICAL INFORMATION

LC 50, 96 Hrs, FISH mg/l >5000

### MOBILITY

The product is soluble in water.

### BIOACCUMULATION

The product is not bioaccumulating.

COD 1.22

## 13 DISPOSAL CONSIDERATIONS

### GENERAL INFORMATION

Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local

Waste Disposal Authority.

Do not puncture or incinerate even when empty.

### DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

## 14 TRANSPORT INFORMATION

GENERAL The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

## 15 REGULATORY INFORMATION

### LABELLING

Harmful

### CONTAINS ETHANEDIOL

### RISK PHRASES

R22 Harmful if swallowed.

### SAFETY PHRASES

S2 Keep out of the reach of children

4 / 4

REVISION DATE: 21st December 2007

## Monoethylene Glycol

### STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations.

### APPROVED CODE OF PRACTICE

Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations

Dangerous for Supply.

### GUIDANCE NOTES

CHIP for everyone HSG(108). Workplace Exposure Limits EH40.

## 16 OTHER INFORMATION

REVISION DATE 21st December 2007

REV. NO./REPL. SDS GENERATED 06

SDS NO. M027

SAFETY DATA SHEET STATUS

Approved.

# Monoethylene glycol - MEG

**HO - CH<sub>2</sub> - CH<sub>2</sub> - OH**

## **Solubility**

water miscible, extremely hygroscopic  
Molecular Weight 62.07 alcohols miscible  
CAS Reg. No. 107-21-1 aldehydes miscible  
EINECS No. 203-473-3 ketones miscible  
esters miscible  
oil immiscible

## **Synonyms** fat immiscible

Monoethylene glycol hydrocarbons immiscible  
Ethene-1,2-diol  
Ethylene glycol

## **Specification**

### **Applications**

Appearance clear, colorless liquid  
Assay min. 99.4%  
Water max. 0.1%  
Acid Value max. 0.1 mg KOH/g  
Antifreeze hydraulic liquid, humectant. Intermediate  
for the production of polyester resins,  
softeners, dynamite viscose film, and  
electrolytical condensers.  
Diethylene glycol max. 0.3%  
Color max. 10 Hazen  
*Test methods are available upon request.*

## **Typical Properties**

### **Packaging**

Melting Point -13°C  
Ash Content 10 ppm  
Distillation Range 195-199°C (min. 95 vol %)  
Density 1113 kg/m<sup>3</sup> at 20°C  
Viscosity 20 mPa·s at 20°C  
Delivered in stainless steel road tankers or  
stainless steel ISO containers  
Evaporation Number 2600  
Flash Point 117°C (*Pensky Martens*  
*Closed Cup*)  
Iron Content max. 0.2 ppm  
Latent heat of  
evaporation  
191 cal/g at b.p.  
Lower explosion limit  
in mixture with air  
3.2%  
Specific Heat 0.57 cal/g/°C at 20°C  
Vapor Pressure 0.06 mm Hg at 20°C  
Chlorides max. 1 ppm (*as NaCl*)

2009-04