

# ETHYLENE GLYCOL MONOMETHYL ETHER

0061  
May 2003

**CAS No: 109-86-4**  
 RTECS No: KL5775000  
 UN No: 1188  
 EC No: 603-011-00-4

2-Methoxyethanol  
 Monomethyl glycol ether  
 Methyl oxitol  
 EGME  
 Methyl cellosolve  
 $C_3H_8O_2$  /  $CH_3OCH_2CH_2OH$   
 Molecular mass: 76.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Flammable.	NO open flames, NO sparks, and NO smoking.	Powder, alcohol-resistant foam, water spray, carbon dioxide.
<b>EXPLOSION</b>	Above 39°C explosive vapour/air mixtures may be formed.	Above 39°C use a closed system, ventilation, and explosion-proof electrical equipment.	In case of fire: keep drums, etc., cool by spraying with water.

EXPOSURE		AVOID EXPOSURE OF (PREGNANT) WOMEN! STRICT HYGIENE!	IN ALL CASES CONSULT A DOCTOR!
<b>Inhalation</b>	Confusion. Cough. Sore throat. Dizziness. Headache. Nausea. Unconsciousness. Vomiting. Weakness.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
<b>Skin</b>	MAY BE ABSORBED! (Further see Inhalation).	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
<b>Eyes</b>	Redness. Pain. Blurred vision.	Face shield, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
<b>Ingestion</b>	Abdominal pain. Diarrhoea. Nausea. Vomiting. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Ventilation. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water. (Extra personal protection: filter respirator for organic gases and vapours.)	T Symbol R: 60-61-10-20/21/22 S: 53-45 Note: E UN Hazard Class: 3 UN Pack Group: III Airtight. Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-30GF1-III NFPA Code: H 2; F 2; R 0	Fireproof. Separated from strong oxidants, food and feedstuffs. Keep in the dark. Cool.

### IMPORTANT DATA

**Physical State; Appearance**

COLOURLESS LIQUID, WITH CHARACTERISTIC ODOUR.

**Chemical dangers**

The substance can form explosive peroxides. Reacts with strong oxidants causing fire and explosion hazard. Attacks some forms of plastic, coatings.

**Occupational exposure limits**

TLV: 5 ppm as TWA; (skin); BEI issued; (ACGIH 2003).  
MAK: 5 ppm, 16 mg/m<sup>3</sup>; H; Pregnancy risk group: B; Peak limitation category: II(8); (DFG 2002).

**Routes of exposure**

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

**Inhalation risk**

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C.

**Effects of short-term exposure**

The substance is mildly irritating to the eyes and the respiratory tract. The substance may cause effects on the central nervous system, blood, bone marrow, kidneys and liver. Exposure at high levels may result in unconsciousness. Medical observation is indicated.

**Effects of long-term or repeated exposure**

The liquid defats the skin. The substance may have effects on the blood and bone marrow, resulting in anaemia and lesions of blood cells. May cause toxicity to human reproduction or development.

### PHYSICAL PROPERTIES

Boiling point: 125°C

Melting point: -85°C

Relative density (water = 1): 0.96

Solubility in water: miscible

Vapour pressure, kPa at 20°C: 0.83

Relative vapour density (air = 1): 2.6

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.01

Flash point: 39°C c.c.

Auto-ignition temperature: 285°C

Explosive limits, vol% in air: 2.3- 24.5

Octanol/water partition coefficient as log Pow: -0.503

### ENVIRONMENTAL DATA

### NOTES

Depending on the degree of exposure, periodic medical examination is indicated.

The odour warning when the exposure limit value is exceeded is insufficient.

Check for peroxides prior to distillation; eliminate if found.

### ADDITIONAL INFORMATION

**LEGAL NOTICE**

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information