

1. PRODUCT NAME: Glycol Ether EM
2. CHEMICAL NAME: Ethylene Glycol Monomethyl Ether
3. SYNONYMS:
4. CAS NUMBER: 109-86-4
5. COMPOSITION: Ethylene Glycol Monomethyl Ether %100

IN CASE OF  
TRANSPORT EMERGENCY  
CONTACT CHEMTREC  
USA: 1-800-424-9300  
INTERNATIONAL: 1-703-527-3887

6. PROPERTIES: ODOR & APPEARANCE: clear, colorless liquid with mild ether odor  
ODOR THRESHOLD: 0.1ppm – 60ppm – poor warning property due to huge variation in detection  
VAPOUR PRESSURE: 6.2mmHg/kPa (20 c)  
EVAPORATION RATE (butyl Acetate=1): 0.53  
VAPOR DENSITY (air=1): 2.6  
BOILING RANGE: 124 c  
FREEZING POINT: -85 c  
SPECIFIC GRAVITY: 0.965 (20/20 c)  
WATER SOLUBILITY: complete  
IN OTHER SOLVENTS: soluble in most organic solvents, including hydrocarbons  
VISCOSITY: 1.7 centipoise (20 c)

7. HAZARDS: HMIS (USA): Health - 3, Fire - 1, Reactivity - 1

8. FIRE FIGHTING INFORMATION: FLASH POINT: 39 c/42 F (closed cup)  
AUTOIGNITION TEMPERATURE: 285 c  
FLAMMABLE LIMITS: 1.8% - 14%  
COMBUSTION PRODUCTS: carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments  
FIREFIGHTING PRECAUTIONS: foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water – water jet spreads flames; firefighters must wear SCBA  
STATIC DISCHARGE: will not accumulate a static charge  
MECHANICAL IMPACT: not sensitive  
CHEMICAL STABILITY: stable; will not polymerize  
REACTIVE WITH: strong oxidizing agents, strong acids or caustics; reacts slowly with oxygen in air  
DECOMPOSITION PRODUCTS: heat sensitive peroxides may form in closed containers; never distil to dryness

9. PERSONAL PROTECTION MEASURES: HANDS: Butyl rubber or “Tychem 10,000” gloves – please confirm selection with supplier  
EYES: safety glasses with side shields or chemical goggles  
VENTILATION: ensure adequate mechanical ventilation; use respirator with organic vapor cartridge for escape purposes, should ventilation fail; keep respirator in a sealed container (“Tupperware” or similar) to ensure the cartridge remains viable  
CLOTHING: impermeable (hands, above) apron, boots, long sleeves, if splashing is anticipated

10. FIRST AID PROCEDURES: SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.  
EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.  
INHALATION: Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.



Carolina International Sales Co., Inc

## MATERIAL SAFETY DATA SHEET

2522 Plantation Center Drive  
Matthews, NC 28105  
(704) 845 9440

www.ciscochem.com

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

11. EXPOSURE TWAEV ppm: 5 – (skin)  
LIMITS: LD50 ORAL: 890  
SKIN (mg/kg): 1280  
LC50ppm INHALATION: 1480

### 12. TOXICOLOGICAL EFFECTS ACUTE EXPOSURE

INFORMATION: SKIN CONTACT: mildly irritant

SKIN ABSORPTION: yes; toxic effects possible by this route, but unlikely to be serious

EYE CONTACT: mildly irritating, unlikely to damage eyes

INHALATION: maximum tolerable concentration is between 25ppm and 115ppm; confusion, disorientation, agitation, muscle weakness and nausea

INGESTION: central nervous depression, headache, dizziness, nausea, poor coordination and eventual unconsciousness

#### EFFECTS OF CHRONIC EXPOSURE

GENERAL: prolonged exposure may cause skin cracking and dermatitis repeated absorption may result in anaemia and reduced white cell numbers; also spleen, thymus and lymph node abnormalities have been reported in rodents given sub-lethal doses; neurological symptoms, anaemia, and weight loss have been reported in workers using product as a cleaner

SENSITISING: not a sensitizer

REPRODUCTIVE EFFECT: testicular damage affecting fertility in several species of rodent; embryotoxic; teratogenic effects have been reported in rodents; no known effect on humans

SYNERGISTIC WITH: existing kidney disease, existing blood disorders

LD50: 2370mg/kg (oral, rat), 2560mg/kg (oral, mouse), 890mg/kg (oral, rabbit), 950mg/kg (oral, guinea, pig); 1280mg/kg (skin, rabbit)

LC50: 1480ppm (inhalation, mouse), 1500ppm (inhalation, rat)

13. ECOLOGICAL This product cannot accumulate in living tissue\*; this product is readily and rapidly biodegradable in the presence of oxygen with an estimated half-life in air of less than 24 hours: in water with activated sewage sludge 65% of the product had degraded within 10 days

14. DISPOSAL DO NOT FLUSH TO SEWER; may be incinerated in approved facility  
CONSIDERATIONS:

15. CARCINOGENIC Not a tumorigen, not a carcinogen  
PROPERTIES &  
NOTIFICATIONS:

16. TRANSPORT USA 49 CFR  
INFORMATION: Product identification number: UN – 1188  
Shipping name: Ethylene glycol monomethyl ether  
Classification: Class3; Packing Group III  
Label: 3 – FLAMMABLE LIQUID  
WHMIS Class: B 3; D 1B, D 2A



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17. HANDLING & STORAGE: Store and use a cool (BELOW 40 C) dry environment, away from sources of ignition, heat and oxidizing agents. This product is toxic by inhalation. Use with adequate ventilation. This product is more toxic than most industrial solvents by ingestion. Do not drink! Follow good industrial hygiene principles – wash hands thoroughly before eating or smoking. If product spills on clothing, remove garments promptly, wash all affected skin and don fresh clothing. Do not re-use soiled garments until these have been thoroughly washed. Avoid sparks – use non-sparking tools and explosion-proof electrical equipment. Warning: Explosive peroxides can form on prolonged storage of this product with oxygen. If prolonged storage of part drums is anticipated, flush drum headspace with nitrogen before sealing. Do not cut, drill, weld or grind on or near this container. Avoid prolonged contact with skin and wash work clothes frequently. An eye bath and safety shower should be available near the workplace.
18. ACCIDENTAL LEAK PRECAUTION: dyke to control spillage and prevent environmental contamination. Fire potential: blanket spill with foam as a precaution against accidental ignition. Take care to avoid sparks – do not operate (turn on OR off) electrical appliances near spill, unless explosion proof  
MEASURES: HANDLING SPILL: ventilate contaminated area; recover free liquid with explosion-proof pumps; absorb residue on an inert sorbent, pick up using non-sparking plastic or aluminium shovel & store in closed containers for disposal.
19. REGULATORY INFORMATION: