

Common Name: **BIS(CHLOROMETHYL) ETHER**

Synonyms: BCME; 1,1'-Dichlorodimethyl Ether

CAS No: 542-88-1

 Molecular Formula: (CH₂Cl)₂O

RTK Substance No: 0234

Description: Colorless liquid with an irritating odor

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
4 - Health 3 - Fire 1 - Reactivity DOT#: UN 2249 ERG Guide #: 131 Hazard Class: 6.1 (Poison)	FLAMMABLE LIQUID Use dry chemical, CO ₂ , water spray or foam as extinguishing agents. Water spray may cause foam or frothing. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Hydrochloric Acid</i> . CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool. Vapors may travel to a source of ignition and flash back. Vapor is heavier than air and may travel a distance to cause a fire or explosion far from the source. Bis(Chloromethyl) Ether may form an ignitable vapor/air mixture in closed tanks or containers.	Bis(Chloromethyl) Ether reacts with WATER or MOIST AIR to form <i>Formaldehyde</i> and <i>Hydrogen Chloride gas</i> . Bis(Chloromethyl) Ether is not compatible with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC) and OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE).

SPILL/LEAKS

Isolation Distance:

Spill: 50 meters (150 feet)

Fire: 800 meters (1/2 mile)

Absorb liquids in vermiculite, dry sand or earth.

 Keep **Bis(Chloromethyl) Ether** out of confined spaces, such as sewers, because of the possibility of an explosion.

Use only non-sparking tools and equipment, especially when opening and closing containers of

Bis(Chloromethyl) Ether.

DO NOT wash into sewer.

Bis(Chloromethyl) Ether is a marine pollutant.

PHYSICAL PROPERTIES

Odor Threshold:	Irritating odor
Flash Point:	66°F (19°C)
Vapor Density:	4 (air = 1)
Vapor Pressure:	30 mm Hg at 72°F (22°C)
Relative Density:	1.3 (water = 1)
Water Solubility:	Decomposes
Boiling Point:	219°F (104°C)
Freezing Point:	-43°F (-42°C)

EXPOSURE LIMITS

OSHA: Refer to 29 CFR 1910.1003

NIOSH: Lowest feasible concentration

ACGIH: 0.001 ppm (8-hr TWA)

The Protective Action Criteria values are:

PAC-1 = 0.006 ppm PAC-2 = 0.044 ppm PAC-3 = 0.18 ppm

PROTECTIVE EQUIPMENT

Gloves:	Silver Shield®/4H® and Barrier® (>8-hr breakthrough for <i>Ethers, aliphatic</i>)
Coveralls:	Tychem® BR, Responder® and TK; and Trelchem® HPS and VPS (>8-hr breakthrough for <i>Ethers, aliphatic</i>)
Respirator:	SCBA

HEALTH EFFECTS

Eyes:	Irritation and burns
Skin:	Irritation and burns
Acute:	Nose, throat and lung irritation with coughing and severe shortness of breath (pulmonary edema)
Chronic:	Cancer (lung) in humans

FIRST AID AND DECONTAMINATION

Remove	the person from exposure.
Flush	eyes with large amounts of water for at least 30 minutes. Remove contact lenses if worn. Seek medical attention immediately.
Quickly	remove contaminated clothing and wash contaminated skin with large amounts of soap and water.
Begin	artificial respiration if breathing has stopped and CPR if necessary.
Transfer	to a medical facility.
Medical	observation is recommended as symptoms may be delayed.