



# Central Pollution Control Board

Ministry of Environment & Forests, Govt of India, Parivesh Bhawan, East Arjun Nagar, Delhi - 110032

## MATERIAL SAFETY DATA SHEETS

379

Methyl bromide

### 1. CHEMICAL IDENTITY

**Chemical Name :** Methyl bromide

**Chemical Classification:** Toxic

**Trade Name :**

**Synonyms:** Bromomethane, Monobromomethane, Embafume

**Formula :** CH<sub>3</sub>Br

**CAS No:** 74-83-9

**UN No:** 1062

#### Regulated Identification

**Shipping Name :** Methyl bromide

**Hazchem Code :** 2XE

**Codes / Label :** Class 2.3, Toxic

**Hazardous Waste ID No :** 6

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
1 Methyl bromide	74-83-9	3	
2		4	

### 2. PHYSICAL / CHEMICAL DATA

**Boiling Pt. °C:** 3.5  
3.6 °C

**Physical State:** Gas

**Appearance:** Colourless

**Melting Pt °C:** -93.66

**Vapour Pressure @ 35°C mmHg:** 1620 mm Hg @ 25 deg C

**Odour:** Odourless to sweet chloroform like odour at high concentrations.

**Vapour Density(Air =1):** 3.3

**Solubility in water at 30°C g/100ml:** 13.4 g/L @ 25 deg C

**Others:** A liquid below 38 degrees F. Shipped as a liquefied compressed gas. Soluble in alcohol, ether, CHCl<sub>3</sub>, CS<sub>2</sub>, benzene.

**Specific Gravity (Water =1 ):** 1.73(0 deg C)(liq); 3.974 g/l (20 deg C)(gas)

**pH :**

### 3. FIRE / EXPLOSION HAZARD DATA

**Flammability :** No

**LEL:** 10

**Flash Point °C in OC:**

**TDG Flammability:**

**UEL:** 16

**Flash Point °C in CC:** -44

**Autoignition Temperature °C :** 536.37

**Explosion sensitivity to impact:** Stable

**Explosion sensitivity to static Electricity:** Explodes

**Hazardous Combustion Products :** Emits toxic and irritating fumes Of HBr

**Hazardous Polymerization :** Will not occur.

**Combustible Liquid:** No

**Explosive Material:** No

**Corrosive Material** No

**Flammable Material:** No

**Oxidiser :** No

**Others:**

**Pyrophoric Material:** No

**Organic Peroxide :** No

### 4. REACTIVITY DATA

**Chemical Stability** : Stable  
**Incompatibility with other material** : Aluminum, magnesium, strong oxidizers  
**Reactivity** : Reacts with metals.  
**Hazardous Reaction Products** : Forms explosive mixtures with air within narrow limits at atmospheric pressure.

## 5. HEALTH HAZARD DATA

**Routes of entry:** Inhalation, Skin, eyes

### Effects of Exposure / Symptoms:

Inhalation : Vapour causes lung congestion and pulmonary edema. Higher concentration causes a rapid necrosis and death. Skin: Liquid causes burns. Eyes: Causes irritation and burns after several hours of exposure.

### Emergency Treatment :

**Inhalation:** Remove the victim to fresh air area, provide artificial respiration or oxygen if needed.  
**Ingestion:** Do not induce vomiting, make the victim drink large amounts of water or milk.

**Skin:** Remove the contaminated clothing. Do not rub the affected area. Flush with water.

**Eyes:** First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital

**Ingestion:** Inhalation is the first route of exposure.

<b>LD50 (oral-rat) mg/kg:</b>	214 mg/kg	<b>STEL:</b>	
<b>LC50 (rat) mg/kg:</b>		<b>Odour Threshold:</b>	80 mg/m
<b>Permissible Exposure Limit:</b>	20 ppm (80 mg/m <sup>3</sup> , skin	<b>TLV (ACGIH) :</b>	5 ppm (20 mg/m <sup>3</sup> ), skin

NFPA Hazard	Health	Flammability	Reactivity	Special
Signals	3	0	0	

## 6. PREVENTIVE MEASURES

**Personal Protective Equipment** : Avoid contact with liquid or vapours. Provide self-contained breathing apparatus, safety goggles and impervious overclothing. rubber hand gloves.

**Handling** : All chemicals should be considered hazardous. Avoid direct physical contact. Use appropriate, approved safety equipment. Untrained individuals should not handle this chemical or its container. Handling should occur in a chemical fume hood.

**Storage** : Protect from heat. Storage area should be dry, ventilated, and cool. Vents should have calcium chloride traps. Keep away from sunlight. Keep constantly below 40 C. Protect against physical damage.

**Precautions** :

## 7. EMERGENCY / FIRST AID MEASURES

### FIRE:

**Fire Extinguishing Media** : Water, foam, CO<sub>2</sub>, dry chemical powder.

**Special Procedure** : Keep the containers cool by spraying water if exposed to heat or flame.

**Unusual Hazards** : Containers may explode, poisonous gases produced.

### EXPOSURE: First Aid Measures:

**Inhalation:** Remove the victim to fresh air area, provide artificial respiration or oxygen if

needed. Ingestion: Do not induce vomiting, make the victim drink large amounts of water or milk.

**Skin:** Remove the contaminated clothing. Do not rub the affected area. Flush with water.

**Eyes:** First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital

**Ingestion:** Inhalation is the first route of exposure.

**Antidotes / Dosages:**

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#### **SPILLS :**

**Steps To Be Taken** : Shut off leaks if without risk. Drench with water.

**Waste Disposal Method:** Seal all the waste in vapour tight plastic bags for eventual disposal

#### **8. ADDITIONAL INFORMATION / REFERENCES**

A poisonous experimental carcinogenic compound. It is reported to be 8 times more toxic on inhalation than ethyl bromide. Because of its greater volatility, it is much more frequent cause of poisoning. Fatal poisoning has resulted from exposure to concentrated Methyl Bromide vapours (8600 • 60000ppm). 100-500 ppm non-fatal 10-15% of mixture with air may be ignited with difficulty. The explosion sensitivity of mixtures with air may be increased by the presence of Aluminium, Magnesium, Zinc or their alloys.

#### **9. MANUFACTURERS / SUPPLIERS DATA**

**NAME OF FIRM :**

**Contact person**

**MAILING ADDRESS :**

**in Emergency :**

**TELEPHONE / TELEX NOS :**

**Local Bodies involved :**

**TELEGRAPHIC ADDRESS :**

**Standard Packing :**

**OTHERS :**

**Trem Card Details / Ref :**

#### **10. DISCLAIMER**

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