



Central Pollution Control Board

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

MATERIAL SAFETY DATA SHEETS

399

Methylene bis (2-chloroaniline)

1. CHEMICAL IDENTITY

Chemical Name : Methylene bis (2-chloroaniline)

Chemical Classification: Toxic

Trade Name :

Synonyms: 4,4'-Methylenebis(2-Chloroaniline), 3,3'-Dichloro-4,4'-diaminodiphenylmethane, 4,4'-Methylenebis[o-chloroaniline], DACPM

Formula : C₁₃H₁₂Cl₂N₂

CAS No: 101-14-4

UN No: 2811

Regulated Identification

Shipping Name : Toxic solid, Organic

Hazchem Code : 2X

Codes / Label : Class 6.1, Toxic

Hazardous Waste ID No : 6

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
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1 Methylene bis (2-chloroaniline)

101-14-4

3

2

4

2. PHYSICAL / CHEMICAL DATA

Boiling Pt. °C:

Physical State: Solid

Appearance: Tan-colored pellets or an off-white solid.

Melting Pt °C: 110

Vapour Pressure @ 35°C mmHg: 2.86X10⁻⁷ mm Hg @ 25 deg C

Odour: Faint, amine-like odour

Vapour Density(Air =1):

Solubility in water at 30°C g/100ml: Slightly soluble

Others: Soluble in hot methyl ethyl ketone, acetone, esters, and aromatic hydrocarbons

Specific Gravity (Water =1) : 1.44

pH : Weak base

3. FIRE / EXPLOSION HAZARD DATA

Flammability : No

LEL:

Flash Point °C in OC:

TDG Flammability:

UEL:

Flash Point °C in CC:

Autoignition Temperature °C :

Explosion sensitivity to impact:

Explosion sensitivity to static Electricity:

Hazardous Combustion Products : When heated to decomposition it emits toxic gases such as Cl⁻, NO_x.

Hazardous Polymerization :

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, sensitive to air. When exposed to heat above 200 degrees, it

undergoes an exothermic and self-sustaining decomposition reaction. In a closed container the pressure build-up can be rapid enough to cause an explosion.

Incompatibility with other material : Avoid contact with chemically-active metals (e.g., potassium, sodium, magnesium, zinc).

Reactivity :

Hazardous :

Reaction Products

5. HEALTH HAZARD DATA

Routes of entry: Inhalation, ingestion, skin and eyes

Effects of Exposure / Symptoms:

It is a toxic chemical and can be absorbed through the skin. It is also a suspected human carcinogen. Exposure may cause methemoglobinemia. Nausea and vomiting may occur in case of ingestion.

Emergency Treatment :

Inhalation: Move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. If there is breathing difficulty, give oxygen and keep the person warm and at rest.

Skin: Flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. Call a hospital

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: Do not induce vomiting. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and call a hospital. If the victim is convulsing or unconscious, do not give anything by mouth.

LD50 (oral-rat) mg/kg: 1140 mg/kg

STEL:

LC50 (rat) mg/kg:

Odour Threshold:

Permissible Exposure Limit: 0.02 ppm (0.22 mg/m³), skin

TLV (ACGIH) : 0.01 ppm, skin.

NFPA Hazard	Health	Flammability	Reactivity	Special
Signals		1	1	

6. PREVENTIVE MEASURES

Personal Protective Equipment : Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Where chemical resistant gloves. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

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 : Keep in a cool, dry, dark location in a tightly sealed container or cylinder. Keep away from incompatible materials, ignition sources and untrained individuals. Secure and label area. Protect containers/cylinders from physical damage.

Precautions :

7. EMERGENCY / FIRST AID MEASURES

FIRE:**Fire Extinguishing Media :****Special Procedure :****Unusual Hazards :****EXPOSURE: First Aid Measures:**

Inhalation: Move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. If there is breathing difficulty, give oxygen and keep the person warm and at rest.

Skin: Flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. Call a hospital

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: Do not induce vomiting. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and call a hospital. If the victim is convulsing or unconscious, do not give anything by mouth.

Antidotes / Dosages:**SPILLS :**

Steps To Be Taken : First remove all sources of ignition. Dampen the solid spill material with 60-70% ethanol and transfer the dampened material to a suitable container. Use absorbent paper dampened with 60-70% ethanol to pick up any remaining material.

Waste Disposal Method:**8. ADDITIONAL INFORMATION / REFERENCES****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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Total No. of Pages: 3