

DIMETHYLAMINE

0260
May 2003

CAS No: 124-40-3
RTECS No: IP8750000
UN No: 1032
EC No: 612-001-00-9

Methanamine, N-methyl
DMA
(cylinder)
(CH₃)₂NH / C₂H₇N
Molecular mass: 45.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Extremely flammable. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking.	Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out; in other cases extinguish with water spray, alcohol-resistant foam, dry powder, carbon dioxide.
EXPLOSION	Gas/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Use non-sparking handtools.	In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.

EXPOSURE		STRICT HYGIENE!	
Inhalation	Burning sensation. Cough. Headache. Laboured breathing. Shortness of breath. Sore throat. Symptoms may be delayed (see Notes).	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
Skin	ON CONTACT WITH LIQUID: FROSTBITE.	Cold-insulating gloves. Protective clothing.	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention.
Eyes	Redness. Pain. Blurred vision.	Safety goggles, 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.
Ingestion		Do not eat, drink, or smoke during work.	

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Ventilation. Remove all ignition sources. NEVER direct water jet on liquid. Remove gas with fine water spray. Do NOT let this chemical enter the environment. (Extra personal protection: complete protective clothing including self-contained breathing apparatus.)	F+ Symbol Xn Symbol R: 12-20-37/38-41 S: (2-)16-26-39 UN Hazard Class: 2.1

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-20S1032 NFPA Code: H3; F4; R0	Fireproof. Cool.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS COMPRESSED LIQUEFIED GAS, WITH PUNGENT ODOUR.

Physical dangers

The gas is heavier than air and may travel along the ground; distant ignition possible.

Chemical dangers

The substance decomposes on burning producing toxic fumes including nitrogen oxides. Reacts violently with strong oxidants and mercury causing fire and explosion hazard. Attacks copper, zinc alloys, aluminium, galvanized surfaces, and plastic. The solution in water is a strong base, it reacts violently with acid and is corrosive, see ICSC 1485 Dimethylamine, aqueous solution.

Occupational exposure limits

TLV: 5 ppm as TWA; 15 ppm as STEL; A4; (ACGIH 2003).
EU OEL: 2 ppm, 3.8 mg/m³ as TWA; 5 ppm, 9.4 mg/m³ as STEL; (EU 1998).

Routes of exposure

The substance can be absorbed into the body by inhalation.

Inhalation risk

On loss of containment, a harmful concentration of this gas in the air will be reached very quickly especially in confined spaces.

Effects of short-term exposure

The substance is severely irritating to the eyes and the respiratory tract. Inhalation of the substance at high levels may cause lung oedema (see Notes). The effects may be delayed. Medical observation is indicated. Rapid evaporation of the liquid may cause frostbite.

PHYSICAL PROPERTIES

Boiling point: 7.0°C
Melting point: -92.2°C
Relative density (water = 1): 0.7
Solubility in water: 354 g/100ml
Vapour pressure, kPa at 25°C: 203

Relative vapour density (air = 1): 1.6
Flash point: Flammable Gas
Auto-ignition temperature: 400°C
Explosive limits, vol% in air: 2.8-14.4
Octanol/water partition coefficient as log Pow: -0.2

ENVIRONMENTAL DATA

The substance is harmful to aquatic organisms.

NOTES

Turn leaking cylinder with the leak up to prevent escape of gas in liquid state.
The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential.
Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered. Do NOT spray water on leaking cylinder (to prevent corrosion of cylinder).
See ICSC 1485 Dimethylamine, aqueous solution.

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