

ETHYLENEDIAMINE

0269
June 2003

CAS No: 107-15-3
RTECS No: KH8575000
UN No: 1604
EC No: 612-006-00-6

1,2-Diaminoethane
1,2-Ethanediamine
Dimethylenediamine
 $H_2NCH_2CH_2NH_2 / C_2H_8N_2$
Molecular mass: 60.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Flammable. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking.	Powder, alcohol-resistant foam, water spray, carbon dioxide.
EXPLOSION	Above 34/C explosive vapour/air mixtures may be formed.	Above 34/C closed system, ventilation, and explosion-proof electrical equipment.	In case of fire: keep drums, etc., cool by spraying with water.

EXPOSURE	AVOID ALL CONTACT!		
Inhalation	Burning sensation. Cough. Shortness of breath. Sore throat. Wheezing.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness. Skin burns. Pain.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Redness. Pain. Blurred vision. Severe deep burns.	Face shield, 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	Abdominal pain. Burning sensation. Shock or collapse.	Do not eat, drink, or smoke during work.	Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention. Do NOT induce vomiting.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Ventilation. Remove all ignition sources. Collect leaking liquid in covered containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT let this chemical enter the environment. (Extra personal protection: complete protective clothing including self-contained breathing apparatus).	<p>EU classification</p> <p>C Symbol R: 10-21/22-34-42/43 S: (1/2-)23-26-36/37/39-45</p> <p>UN classification</p> <p>UN Hazard Class: 8 UN Subsidiary Risks: 3 UN Pack Group: II</p> <p>Do not transport with food and feedstuffs.</p>

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-80S1604 NFPA Code: H 3; F 2; R 0	Fireproof. Separated from strong oxidants, acids, chlorinated organic compounds, food and feedstuffs. Dry.

IMPORTANT DATA**Physical State; Appearance**

COLOURLESS TO YELLOW HYGROSCOPIC LIQUID, WITH PUNGENT ODOUR.

Chemical dangers

The substance decomposes on burning producing toxic fumes (nitrogen oxides). The substance is a medium strong base. Reacts violently with chlorinated organic compounds, strong oxidants acids.

Occupational exposure limits

TLV: 10 ppm as TWA; (skin); A4; (ACGIH 2003).

MAK: IIb (not established but data is available) sensitization of respiratory tract and skin (Sah); (DFG 2005).

Routes of exposure

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

Inhalation risk

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20/C.

Effects of short-term exposure

The substance is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dermatitis. Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation exposure may cause asthma.

PHYSICAL PROPERTIES

Boiling point: 117/C

Melting point: 8.5/C

Relative density (water = 1): 0.9

Solubility in water: miscible

Vapour pressure, kPa at 20/C: 1.4

Relative vapour density (air = 1): 2.1

Relative density of the vapour/air-mixture at 20/C (air = 1): 1.01

Flash point: 34/C (c.c.)

Auto-ignition temperature: 385/C

Explosive limits, vol% in air: 2.5-16.6

Octanol/water partition coefficient as log Pow: -1.2

ENVIRONMENTAL DATA

The substance is harmful to aquatic organisms.

NOTES

The symptoms of asthma often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.

Anyone who has shown symptoms of asthma due to this substance should never again come into contact with this substance.

Do NOT take working clothes home.

Card has been partially updated in January 2008: see Ingestion First Aid.

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