

**DIETHYLENETRIAMINE****0620**

March 1996

**CAS No: 111-40-0**

RTECS No: IE1225000

UN No: 2079

EC No: 612-058-00-X

N-(2-Aminoethyl)-1,2-ethanediamine

3-Azapentane-1,5-diamine

DETA

C<sub>4</sub>H<sub>13</sub>N<sub>3</sub> / NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>

Molecular mass: 103.2

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames.	Powder, alcohol-resistant foam, water spray, carbon dioxide.
<b>EXPLOSION</b>	Above 97/C explosive vapour/air mixtures may be formed.	Above 97/C use a closed system, ventilation, and explosion-proof electrical equipment.	In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		PREVENT GENERATION OF MISTS! STRICT HYGIENE!	IN ALL CASES CONSULT A DOCTOR!
<b>Inhalation</b>	Sore throat. Cough. Burning sensation. Laboured breathing. 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.
<b>Skin</b>	Pain. Serious skin burns.	Protective gloves. Protective clothing.	First rinse with plenty of water, then remove contaminated clothes and rinse again. Refer for medical attention.
<b>Eyes</b>	Pain. Severe deep burns. Loss of vision.	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.
<b>Ingestion</b>	Burning sensation. Abdominal pain. Shock or collapse.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Rest. Refer for medical attention.

**SPILLAGE DISPOSAL**

Ventilation. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Personal protection: complete protective clothing including self-contained breathing apparatus.

**PACKAGING & LABELLING**

C Symbol  
R: 21/22-34-43  
S: (1/2-)26-36/37/39-45  
UN Hazard Class: 8  
UN Pack Group: II

Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.

**EMERGENCY RESPONSE**

Transport Emergency Card: TEC (R)-80GC7-II+III  
NFPA Code: H3; F1; R1

**SAFE STORAGE**

Separated from strong oxidants, acids, food and feedstuffs, organic nitro compounds. Keep in a well-ventilated room.

**IPCS**

International  
Programme on  
Chemical Safety



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SEE IMPORTANT INFORMATION ON THE BACK.

## IMPORTANT DATA

**Physical State; Appearance**

COLOURLESS TO YELLOW, VISCOUS, HYGROSCOPIC LIQUID, WITH CHARACTERISTIC ODOUR.

**Physical dangers**

The vapour is heavier than air.

**Chemical dangers**

The substance decomposes on burning producing toxic and corrosive gases including nitrogen oxides. The solution in water is a strong base, it reacts violently with acid and is corrosive. Reacts violently with oxidants, nitric acid, and organic nitro compounds. Attacks many metals in presence of water.

**Occupational exposure limits**

TLV: 1 ppm as TWA; (skin); (ACGIH 2004).  
MAK: sensitization of skin (Sh); (DFG 2004).

**Routes of exposure**

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

**Inhalation risk**

A harmful contamination of the air will not or will only very slowly be reached 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. Inhalation of the vapour may cause lung oedema (see Notes). The effects may be delayed. Medical observation is indicated.

**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: 207/C  
Melting point: -39/C  
Relative density (water = 1): 0.96  
Solubility in water: miscible  
Vapour pressure, Pa at 20/C: 37

Relative vapour density (air = 1): 3.56  
Flash point: 97/C c.c., 102/C o.c.  
Auto-ignition temperature: 358/C  
Explosive limits, vol% in air: 1-10  
Octanol/water partition coefficient as log Pow: -1.3

## ENVIRONMENTAL DATA

## NOTES

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 are therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered. The odour warning when the exposure limit value is exceeded is insufficient. Card has been partly updated in October 2005. See sections Occupational Exposure Limits, Emergency Response.

## ADDITIONAL INFORMATION

## LEGAL NOTICE

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