VINYL CYCLOHEXENE DIOXIDE

0820
November 1998

CAS No: 106-87-6
RTECS No: RN8640000
UN No: 2810
EC No: 603-066-00-4

3-Oxiranyl-7-oxabicyclo(4.1.0) heptane
1-Epoxyethyl-3,4-epoxycyclohexane
Vinyl cyclohexene diepoxide
$C_8H_{12}O_2$
Molecular mass: 140.2

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Powder, alcohol-resistant foam, water spray, carbon dioxide.
EXPLOSION	Risk of fire and explosion on contact with acid(s) and base(s).		
EXPOSURE		**AVOID ALL CONTACT!**	**IN ALL CASES CONSULT A DOCTOR!**
Inhalation	Cough. Laboured breathing. Sore throat.	Ventilation. Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
Skin	MAY BE ABSORBED! Dry skin. Redness. Pain. Swelling.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.
Eyes	Redness. Pain.	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	(See Inhalation).	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING	
Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water. Personal protection: complete protective clothing including self-contained breathing apparatus.	T Symbol R: 23/24/25-68 S: (1/2-)23-24-45 UN Hazard Class: 6.1	Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-61GT1-III	Separated from food and feedstuffs, alcohols, amines, and other active hydrogen compounds. Dry. Ventilation along the floor.

IPCS
International Programme on Chemical Safety

Prepared in the context of cooperation between the International Programme on Chemical Safety and the European Commission

IMPORTANT DATA

Physical State; Appearance
COLOURLESS LIQUID.

Chemical dangers
The substance polymerize with acids and bases with fire or explosion hazard. On combustion, forms acrid smoke and irritating fumes. Reacts with active hydrogen compounds (e.g., alcohols, amines).

Occupational exposure limits
TLV: 0.1 ppm as TWA; (skin); A3; (ACGIH 2004).
MAK: H; Carcinogen category: 2; (DFG 2004).

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 very quickly on evaporation of this substance at 20/C.

Effects of short-term exposure
The substance is irritating to the eyes, the skin and the respiratory tract. Inhalation of the substance may cause lung oedema (see Notes). Exposure at high level may result in death. The effects may be delayed. Medical observation is indicated. See Notes.

Effects of long-term or repeated exposure
The substance may have effects on the kidneys, ovary, testis, resulting in tissue lesions. This substance is possibly carcinogenic to humans. Animal tests show that this substance possibly causes toxic effects upon human reproduction.

PHYSICAL PROPERTIES

Boiling point: 227/C
Melting point: <-55/C
Relative density (water = 1): 1.10
Solubility in water, g/100 ml at 20/C: 18.3
Vapour pressure, kPa at 20/C: <0.13
Relative vapour density (air = 1): 4.8
Relative density of the vapour/air-mixture at 20/C (air = 1): 1
Flash point: 110/C o.c.
Auto-ignition temperature: 393/C
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 is therefore essential.
Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.
EP-206, ERLA-2270, ERLA-2271, UNOX Epoxide 206, NCI-C60135, and Chissonox-206 are trade names.
Card has been partly updated in October 2004. See sections Occupational Exposure Limits, EU classification, Emergency Response.

ADDITIONAL INFORMATION