

CALCIUM CYANIDE

0407

November 1998

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 RTECS No: EW0700000
 UN No: 1575
 EC No: 020-002-00-5

Calcyanide
 Calcyan
 $C_2CaN_2 / Ca(CN)_2$
 Molecular mass: 92.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Not combustible but forms flammable gas on contact with water or damp air. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking. NO contact with water, carbon dioxide, acid(s). NO contact with hot surfaces.	Powder, dry sand, NO hydrous agents. NO water. NO carbon dioxide.
EXPLOSION			
EXPOSURE		STRICT HYGIENE!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Chest tightness. Confusion. Convulsions. Cough. Dizziness. Headache. Laboured breathing. Nausea. Shortness of breath. Unconsciousness. Vomiting. Weakness. Red coloration of the skin.	Local exhaust or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention. See Notes.
Skin	MAY BE ABSORBED! Redness. Pain. (Further see Inhalation).	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention. Wear protective gloves when administering first aid. See Notes.
Eyes	Redness. Pain.	Safety spectacles, face shield, or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Burning sensation in the throat and chest. (Further 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. See Notes.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Do NOT wash away into sewer. Sweep spilled substance into containers. Carefully collect remainder, then remove to safe place. Prevent contact with water or moist substances. Do NOT let this chemical enter the environment. Chemical protection suit including self-contained breathing apparatus.	<p>EU classification T+ Symbol N Symbol R: 28-32-50/53 S: (1/2-)7/8-23-36/37-45-60-61</p> <p>UN classification UN Hazard Class: 6.1 UN Pack Group: I</p>

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-61GT5-I-Cy NFPA Code: H 3; F 0; R 0.	Fireproof. Provision to contain effluent from fire extinguishing. Separated from strong oxidants, acids, food and feedstuffs. Dry. Well closed.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS CRYSTALS OR WHITE POWDER, WITH CHARACTERISTIC ODOUR.

Chemical dangers

The substance decomposes on heating above 350/C, producing toxic fumes including nitrogen oxides and hydrogen cyanide. Reacts violently with water, moist air, carbon dioxide, acids and acid salts producing highly toxic and flammable hydrogen cyanide. Reacts violently when heated with oxidizing substances causing fire and explosion hazard.

Occupational exposure limits

TLV: (as CN) 5 mg/m³ (Ceiling value); (skin); (ACGIH 2004).
MAK: (as CN, inhalable fraction) 2 mg/m³; H; Peak limitation category: (II1); Pregnancy risk group: C; (DFG 2006).

Routes of exposure

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

Inhalation risk

Evaporation at 20/C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

Effects of short-term exposure

The substance is irritating to the eyes, the skin and the respiratory tract. The substance may cause effects on the intracellular oxygen metabolism, resulting in seizures and unconsciousness. Exposure may result in death.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dermatitis.

PHYSICAL PROPERTIES

Decomposes below melting point at >350/C
Density: 1.8 g/cm³

Solubility in water: reaction

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.
Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available.
No odour warning if toxic concentrations are present.
Do NOT take working clothes home.
Card has been partly updated in October 2004. See sections Occupational Exposure Limits, EU classification, Emergency Response.
Card has been partially updated in July 2007: see Occupational Exposure Limits.

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