

# 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN

1467

November 2003

CAS No: 1746-01-6  
RTECS No: HP3500000  
UN No: 2811

Dibenzo b,e 1,4dioxin, 2,3,7,8-tetrachloro-  
2,3,7,8-TCDD  
2,3,7,8-Tetrachloro-1,4-dioxin  
C<sub>12</sub>H<sub>4</sub>Cl<sub>4</sub>O<sub>2</sub>  
Molecular mass: 322

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: powder, water spray, foam, carbon dioxide.
<b>EXPLOSION</b>			

EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
<b>Inhalation</b>	Chloracne. Symptoms may be delayed.	Use appropriate engineering controls.	Fresh air, rest. Refer for medical attention.
<b>Skin</b>	MAY BE ABSORBED! (See Inhalation). Redness. Pain.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.
<b>Eyes</b>	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.
<b>Ingestion</b>	(See Inhalation).	Do not eat, drink, or smoke during work. Wash hands before eating.	Give a slurry of activated charcoal in water to drink. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Chemical protection suit including self-contained breathing apparatus.	UN Hazard Class: 6.1 UN Pack Group: I

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-61GT2-I	Separated from food and feedstuffs.

### IMPORTANT DATA

**Physical State; Appearance**

COLOURLESS TO WHITE NEEDLE-LIKE CRYSTALS

**Chemical dangers**

The substance decomposes on heating to 750-800°C and under the influence of UV light producing chlorine.

**Occupational exposure limits**

TLV not established.

MAK: (Inhalable fraction)  $10^{-8}$  mg/m<sup>3</sup>; Peak limitation category: II(8); skin absorption (H); Carcinogen category: 4; Pregnancy risk group: C; (DFG 2003).

**Routes of exposure**

The substance can be absorbed into the body by inhalation of dust, 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 cardiovascular system, gastrointestinal tract, liver, nervous system and endocrine system. The effects may be delayed.

**Effects of long-term or repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the bone marrow, endocrine system, immune system, liver and nervous system. This substance is carcinogenic to humans. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

### PHYSICAL PROPERTIES

Melting point: 305-306°C  
Density: 1.8 g/cm<sup>3</sup>  
Solubility in water: none

Vapour pressure, Pa at 25°C: negligible  
Octanol/water partition coefficient as log Pow: 6.8-7.02

### ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. This substance may be hazardous in the environment; special attention should be given to soil contamination. Bioaccumulation of this chemical may occur in fish, in plants, in mammals and in milk. It is strongly advised that this substance does not enter the environment.

### NOTES

This chemical is only produced for research purposes, but could be generated as a by-product from chemical processes or fires. Card has been partly updated in April 2005. See section 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