

# CHLORODIFLUOROETHANE

0643

November 1998

CAS No: 75-68-3  
RTECS No: KH7650000  
UN No: 2517

1-Chloro-1,1-difluoroethane  
HCFC 142 b  
(cylinder)  
 $C_2H_3ClF_2$  /  $CH_3CClF_2$   
Molecular mass: 100.5

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Extremely flammable. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking.	Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out; in other cases extinguish with water spray.
<b>EXPLOSION</b>	Gas/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting.	In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.

EXPOSURE			
<b>Inhalation</b>	Drowsiness. Suffocation. (See Notes).	Ventilation.	Fresh air, rest. Artificial respiration if indicated. Refer for medical attention.
<b>Skin</b>	ON CONTACT WITH LIQUID: FROSTBITE.	Cold-insulating gloves.	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention.
<b>Eyes</b>	See Skin.	Safety goggles, 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>			

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Ventilation. Remove all ignition sources. NEVER direct water jet on liquid. (Extra personal protection: chemical protection suit including self-contained breathing apparatus).	<b>UN classification</b> UN Hazard Class: 2.1

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-20G41 NFPA Code: H; F4; R0.	Fireproof. Cool.

### IMPORTANT DATA

**Physical State; Appearance**

COLOURLESS COMPRESSED LIQUEFIED GAS.

**Physical dangers**

The gas is heavier than air and may travel along the ground; distant ignition possible, and may accumulate in low ceiling spaces causing deficiency of oxygen.

**Chemical dangers**

The substance decomposes on burning producing toxic and corrosive gases including hydrogen chloride and hydrogen fluoride. Reacts violently with oxidants causing fire hazard.

**Occupational exposure limits**

TLV not established.

MAK: 1000 ppm, 4200 mg/m<sup>3</sup>, Peak limitation category: II(8); Pregnancy risk group: D (DFG 2006).

**Routes of exposure**

The substance can be absorbed into the body by inhalation.

**Inhalation risk**

A harmful concentration of this gas in the air will be reached very quickly on loss of containment.

**Effects of short-term exposure**

Rapid evaporation of the liquid may cause frostbite. The substance may cause effects on the cardiovascular system.

### PHYSICAL PROPERTIES

Boiling point: -9/C

Melting point: -131/C

Relative density (water = 1): 1.1

Solubility in water, g/100 ml at 25/C: 0.19

Vapour pressure, kPa at 25/C: 337

Relative vapour density (air = 1): 3.5

Flash point: Flammable Gas

Auto-ignition temperature: 632/C

Explosive limits, vol% in air: 6.2 - 17.9

Octanol/water partition coefficient as log Pow: 1.6

### ENVIRONMENTAL DATA

Avoid release to the environment in circumstances different to normal use.

### NOTES

High concentrations in the air cause a deficiency of oxygen with the risk of unconsciousness or death.

Check oxygen content before entering area.

Turn leaking cylinder with the leak up to prevent escape of gas in liquid state.

Freon 142B, Genetron 142B, Isotron 142B are trade names.

Card has been partially updated in August 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