Safety (MSDS) data for 1,1,2-trichloro-1,2,2-trifluoroethane

General

Synonyms: Freon 113, fluorocarbon 113, 1,1,2-trichlorotrifluoroethane, refrigerant 113, genetron 113, trichloro-1,2,2-trifluoroethane, Diflon S-3, CFC-113, frigen 113 TR-T, Ucon 113
Use: refrigerant in low capacity centrifugal chiller packaged units (low pressure, high volume systems)
Molecular formula: C₂Cl₃F₃
CAS No: 76-13-1
EC No: 200-936-1

Physical data

Appearance: colourless liquid or gas
Melting point: -35 C
Boiling point: 48 C
Vapour density: 6.5 (air = 1)
Vapour pressure: 285 mm Hg at 20 C
Density (g cm⁻³): 1.5635 at 25 C
Flash point: none
Explosion limits:
Autoignition temperature:
Water solubility: negligible

Stability

Stable. Non-flammable. Incompatible with alkali metals, chemically active metals, magnesium, zinc, aluminium.

Toxicology
At high levels may act as an asphyxiant. Typical TLV/TWA 1000 ppm. Typical STEL 1250 ppm.

**Toxicity data**
(The meaning of any abbreviations which appear in this section is given [here.](#))

ORL-RAT LD50 43000 mg kg\(^{-1}\)
IHL-RAT LC50 260 g/m3/2h
IHL-HMN TCLO 4500 ppm
IHL-GPG LCLO 50,000 ppm/1h

**Risk phrases**
(The meaning of any risk phrases which appear in this section is given [here.](#))

**Transport information**
(The meaning of any UN hazard codes which appear in this section is given [here.](#))

UN No 8027. Hazard class 9.

**Personal protection**

Adequate ventilation. Breakdown products of this chemical may cause damage to the upper atmosphere.

**Safety phrases**
(The meaning of any safety phrases which appear in this section is given [here.](#))

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