



Material Safety Data Sheet: FE-13

BS ISO 14520 (2000) Designation: HFC-23

Unit 14, The Homeground, Buckingham Industrial Park, Buckingham. MK18 1UH
Tel: 0870 4422 644 Fax: 0870 4422 645 Email: info@fireprosystems.co.uk

1 Identification of the substance/preparation and of the company.

Product Name: FE-13 Fire Extinguishing Agent
Synonyms: HFC-23
Chemical Name: Trifluoromethane
Company Identification: Du Pont de Nemours (Nederland) B.V. Dordrecht Works, Baanhoekweg 22, NL-3313 LA DORDRECHT, +31(78)630.1567 / 630.1011
Emergency phone Number: 01504 861313

2 Composition/Information on Ingredients

Components/Impurities: Trifluoromethane
Weight %: 100%
CAS No: 75-46-7
EC No: 200-872-4

3 Hazards Identification

Most important hazards: Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Specific hazards: Rapid evaporation of the liquid may cause frostbite. May cause cardiac arrhythmia.

4 First Aid Measures

General advice: Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air. Oxygen or artificial respiration if needed. Do not give adrenaline or similar drugs.

Skin contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Eye contact: Wash off immediately with plenty of water. Take off all contaminated clothing immediately

5 Fire Fighting Measures

Suitable extinguishing media: Any

Specific hazards: Pressure build-up.

Specific methods: Cool containers/tanks with water spray.

6 Accidental Release Measures

Personal precautions: Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions: Evaporates.

Clean up methods: Evaporates.

7 Handling and storage

Handling:

► **Technical measures/ Precautions:** Provide sufficient air exchange and/or exhaust in work rooms.

► **Safe handling advice:** Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid temperatures above 150 °C.

Storage:

► **Technical measures/Storage conditions:** Keep tightly closed in a dry, cool and well ventilated place.

► **Incompatible products:** Explosive, flammable materials, organic peroxide.

► **Packaging material:** Store in original container.

8 Exposure Control/Personal Protection

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Control parameters: DuPont's acceptable exposure limit: AEL (8-h and 12-h TWA) = 1000 ml/m³ ; DuPont (1995)

Personal protective equipment:

► **Respiratory protection:** For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

► **Eye protection:** safety glasses

► **Hand protection:** rubber gloves

► **Hygiene measures:** do not smoke

9 Physical And Chemical Properties

Form: Liquefied gas.

Colour: Colourless

Odour: Ether like.

pH: Neutral

Boiling point/range: (1 bar) -82.2 °C

Melting point/range: -155.2 °C

Flash Point: Does not flash

Explosive properties: No data available

Vapour pressure 25 °C: 4516.6 kPa

Relative density, 25 °C (liquid): 0.67 kg/L

Solubility mg/l water: Negligible

10 Stability And Reactivity

Stability: No decomposition if used as directed.

Materials to avoid: Alkali metals, alkaline earth metals, powdered metal salts, powdered Al, Zn, Be, etc.

Hazardous decomposition products: Hydrogen halides, traces of carbonyl halides.

11 Toxicological Information

Acute Toxicity: LC50/inhalation/4 h/rat = > 663000ppm

Local Effects: Concentrations substantially above the OEL value may cause narcotic effects. Inhalation of decomposition products in high concentrations may cause shortness of breath (lung oedema).

Long term toxicity: Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

Specific effects: Rapid evaporation of the liquid may cause frostbite. May cause cardiac arrhythmia.

12 Ecological Information

Ecological Information: No data available.



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13 Disposal Considerations

Waste from residues/ unused products: Can be used after re-conditioning.

Contaminated packaging: Empty pressure vessels should be returned to the supplier.

14 Transport Information

UN-No: 1984

ADR/RID:

▶ **Class:** 2

▶ **Trem-card:** 20G39-A

▶ **Proper Shipping Name:** 1984 Trifluoromethane (R-23), 2, 2A, ADR

▶ **Item:** 2A

▶ **HI/UN No:** 20/1984

▶ **ADR/RID-Labels:** 2

ICAO:

▶ **UN/ID No.:** 1984

▶ **Packaging group:** n.a.

▶ **Proper shipping Name:** Trifluoromethane (R-23)

▶ **Class:** 2.2

▶ **ICAO-Labels:** Non-flammable compressed gas.

▶ **Subrisks:** n.a.

IMO:

▶ **Class:** 2.2

▶ **Packaging group:** n.a.

▶ **EmS:** 2-09

▶ **Proper shipping name:** Trifluoromethane (R-23)

▶ **IMDG Page:** 2184

▶ **IMO-Labels:** Non-flammable compressed gas.

▶ **MFAG:** 350

▶ **Subrisks:** n.a.

n.a. = not applicable.

15 Regulatory Information

According to regulation 5 of the CHIPS Regs 1994, the product is not classified as dangerous for supply.

16 Other Information

Recommended Use: Fire extinguishing agent.

Further Information: For further information contact the local DuPont Office or DuPont's nominated distributors.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.