

# SAFETY DATA SHEET

According to B.E. 2555 (2012)

Version 1  
Product Name Difluoromethane (R32)

Issue Date 27-Jul-2020  
Revision date 27-Jul-2020

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### Product identifier

Product Name Difluoromethane (R32)

### Other means of identification

Synonyms HFC-32, R32

### Recommended use of the chemical and restrictions on use

Recommended Use Refrigerant  
Uses advised against No information available

### Details of the supplier of the safety data sheet

Supplier  
Address  
Postal Code  
Phone  
FAX  
E-mail

### Emergency telephone number

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Flammable gases Category 1 - (H220)  
Gases under pressure Liquefied gas - (H280)

### Label elements

Symbols/Pictograms



Signal word  
Hazard Statements

Danger  
H220 - Extremely flammable gas  
H280 - Contains gas under pressure; may explode if heated  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely  
P381 - Eliminate all ignition sources if safe to do so  
P410 + P403 - Protect from sunlight. Store in a well-ventilated place

Precautionary Statements

### Other hazards

No information available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Description Substance

Chemical Name	CAS No	Weight-%
Methylene fluoride	75-10-5	>=99.0

#### 4. FIRST AID MEASURES

##### Description of first aid measures

General advice	Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth. Get medical attention. Never give anything by mouth to an unconscious person.

##### Most important symptoms and effects, both acute and delayed

No information available.

##### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

##### Extinguishing media

Suitable extinguishing media	CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam.
Unsuitable extinguishing media	Do not use straight streams.

##### Specific hazards arising from the chemical

Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

##### Protective equipment and precautions for firefighters

Evacuate personnel to safe areas. Move containers from fire area if you can do it without risk. Cool drums with water spray. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Stay upwind. Ensure adequate ventilation, especially in confined areas.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

- Evacuate personnel to safe areas
- Ensure adequate ventilation, especially in confined areas
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area)
- Avoid contact with skin, eyes or clothing
- Contaminated work clothing should not be allowed out of the workplace
- Do not breathe gas/vapors
- Use personal protection recommended in Section 8
- Wash thoroughly after handling

##### Environmental precautions

- Local authorities should be advised if significant spillages cannot be contained
- Prevent entry into waterways, sewers, basements or confined areas

**Methods and material for containment and cleaning up**

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13)

**7. HANDLING AND STORAGE****Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice  
 Ensure adequate ventilation, especially in confined areas  
 Avoid contact with skin, eyes or clothing  
 Wash contaminated clothing before reuse  
 Do not breathe gas/vapors  
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
 Do not eat, drink or smoke when using this product  
 Use personal protection recommended in Section 8  
 Wash thoroughly after handling

**Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place  
 Keep away from heat, sparks, flame and other sources of ignition  
 Keep locked up and out of reach of children  
 Keep away from food, drink and animal feeding stuffs  
 Store in accordance with local regulations

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

Chemical Name	Latvia	France	Finland	Germany	Italy
Methylene fluoride (CAS #: 75-10-5)	TWA: 2 ppm TWA: 20 mg/m <sup>3</sup>	-	-	-	-

**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations. Remove all sources of ignition.

**Individual protection measures, such as personal protective equipment**

Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Hand Protection	Wear protective gloves.
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

Appearance	Gas
Color	Colorless
Odor	Slightly ethers aroma
Odor Threshold	Not determined
pH	ca. 7
Melting point/freezing point	-136 °C
Boiling point / boiling range	57.1 °C
Flash point	Not determined
Evaporation rate	Not determined
Flammability (gas)	Highly flammable liquid and vapor
Flammability Limit in Air	14 - 33% (V/V)
Vapor Pressure	1702 kPa (25 °C)

<b>Vapor density</b>	1.8
<b>Density</b>	1.1 mg/L
<b>Relative density</b>	Not determined
<b>Bulk density</b>	Not determined
<b>Specific gravity</b>	Not determined
<b>Water solubility</b>	0.44% (25 °C, 1709 kPa)
<b>Partition coefficient (LogPow)</b>	0.2
<b>Autoignition temperature</b>	648 °C
<b>Decomposition temperature</b>	>25 °C
<b>Kinematic viscosity</b>	Not determined
<b>Dynamic viscosity</b>	Not determined
<b>Explosive properties</b>	Heating may cause a fire or explosion. May form explosive peroxides.
<b>Oxidizing properties</b>	Not determined

**Other information**

No information available.

## 10. STABILITY AND REACTIVITY

**Reactivity**

No information available.

**Chemical stability**

Stable under normal conditions.

**Possibility of Hazardous Reactions**

Heating may cause a fire or explosion. May form explosive peroxides.

**Conditions to avoid**

Strong heating. Heat, flames and sparks. Extremes of temperature and direct sunlight. Incompatible materials.

**Incompatible materials**

Strong bases. Alkali metals.

**Hazardous Decomposition Products**

Hydrogen fluoride, carbonyl fluoride.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Methylene fluoride (CAS #: 75-10-5)	-	-	= 1890 g/m <sup>3</sup> (Rat) 4 h

**Skin corrosion/irritation**

Non-irritating to the skin.

**Serious eye damage/eye irritation**

No eye irritation.

**Sensitization**

No sensitization responses were observed.

**Germ cell mutagenicity**

No information available.

**Carcinogenicity**

No information available.

**Reproductive toxicity**

No information available.

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

No information available.

**Aspiration hazard**

No information available.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Fish: LC50 = 1507 mg/L/ 96 h( freshwater fish)  
 Aquatic invertebrates: EC50 = 652 mg/L/ 48 h(daphnid)  
 Algae: EC50 = 142 mg/L/ 96 h(green algae)

**Persistence and degradability**

Not readily biodegradable.

**Bioaccumulation**

No information available.

**Mobility**

No information available.

**Other adverse effects**

No information available.

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION**

<b>UN Number</b>	3252
<b>Proper shipping name</b>	DIFLUOROMETHANE (REFRIGERANT GAS R 32)
<b>Hazard Class</b>	2.1
<b>Packing Group</b>	II
<b>Environmental hazards</b>	Non-marine pollutant
<b>Special precautions</b>	No information available

Transport in bulk according to Annex II of MARPOL Not applicable  
73/78 and the IBC Code

**15. REGULATORY INFORMATION**

**International Inventories**

Component	AICS	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	TSCA
Methylene fluoride 75-10-5 ( >=99.0% )	X	-	X	X	X	X	X	X

"-" Not Listed

"X" Listed

**16. OTHER INFORMATION**

**Revision Note**

Issue Date 27-Jul-2020  
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Revision Note Not applicable

**Key or legend to abbreviations and acronyms used in the safety data sheet**

- TWA** - TWA (time-weighted average)
- STEL** - STEL (Short Term Exposure Limit)
- Ceiling** - Maximum limit value
- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- IECSC** - China Inventory of Existing Chemical Substances
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

**Disclaimer**

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