

# SINOCHEM LANTIAN FLUORO MATERIALS CO.,LTD.

## SAFETY DATA SHEET

According to B.E. 2555 (2012)

Version 1  
Product Name Difluoromethane (R32)

Issue Date 27-Jul-2015  
Revision date 27-Jul-2015

### 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 SINOCHEM LANTIAN FLUORO MATERIALS CO.,LTD.  
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### 2. HAZARDS IDENTIFICATION

#### GHS Classification

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

#### Label elements

Symbols/Pictograms



Signal word Danger  
Hazard Statements H220 - Extremely flammable gas  
H280 - Contains gas under pressure; may explode if heated  
Precautionary Statements 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

**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

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

UN Number

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

## 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-2015
Revision date	27-Jul-2015
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

The information provided in this Material 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 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

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