



MATERIAL SAFETY DATA SHEET

Difluoromethane (R32)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Difluoromethane

TRADE NAMES/SYNONYMS: Methylene fluoride; Carbon fluoride hydride (CF₂H₂);
Difluoromethane; Freon 32;

Substance : Difluoromethane

Product Use : Synthetic/Analytical chemistry.

Manufacturers: SRF Ltd. Chemicals Business
V&PO: JHIWANA, Tehsil. TIJARA, Dist. - ALWAR,
RAJASTHAN, INDIA
Pin Code-301019

EMERGENCY CONTACT: (24 Hours/Day, 7 Days/Week)

Mr. Manoj Kumar Sharma
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2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: Difluoromethane

CAS NUMBER: 75-10-5

PERCENTAGE: 99.9

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

FLAMMABLE GAS.

MAY CAUSE FLASH FIRE.

MAY BE HARMFUL IF SWALLOWED.

CAN CAUSE TARGET ORGAN DAMAGE.

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Keep away from heat, sparks and flame. Do not ingest. Can cause target organ damage. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed.

INHALATION: Acute-Inhalation: very high concentration. May cause CNS depression w/dizziness, incoordination, drowsiness or Unconsciousness, irregular heartbeat, suffocation.

SKIN CONTACT: Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

EYE CONTACT: Liquid can cause burns similar to frostbite.

INGESTION: not considered a potential Route of exposure.

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

SKIN CONTACT: If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105- 115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

EYE CONTACT: Flush eyes with plenty of water.

INGESTION: If a large amount is swallowed, get medical attention.

NOTE TO PHYSICIAN: For inhalation, consider oxygen.

5. FIRE FIGHTING MEASURES

Flammability of the product : Flammable.

Auto-ignition temperature : 647.13°C (1196.8°F)

Flammable limits : Lower: 14% Upper: 31%

Products of combustion : Decomposition products may include the following materials:
carbon dioxide carbon monoxide halogenated compounds

Fire-fighting media and instructions

Use an extinguishing agent suitable for the surrounding fire.

Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk. Contains gas under pressure. Extremely flammable liquefied gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

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Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Eliminate ignition sources.

7. HANDLING AND STORAGE

Ensure equipment is adequately earthed. Suck back of water into the container must be prevented. Purge air from system before introducing gas. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Keep away from ignition sources (including static discharges). Segregate from oxidant gases and other oxidants in store. Keep container below 50°C in a well ventilated place.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

1000 ppm, TWA (8 Hrs.)

VENTILATION: Provide local exhaust ventilation system. Ventilation equipment should be explosion resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

EYE PROTECTION: For the gas: Eye protection not required, but recommended.

For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear insulated gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive pressure mode.

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Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

9. PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight	52
Melting point	-136 °C
Boiling point	-51.7 °C
Relative density, gas	1.8 (air=1)
Relative density, liquid	1.1 (water=1)
Vapour Pressure 20°C	13.8 bar
Solubility mg/l water	No reliable data available.
Appearance/Colour	Colourless gas
Odour	Ethereal
Poor warning properties at low concentrations.	
Autoignition temperature	648 °C
Flammability range	14-31 vol% in air.
Other data Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.	

10. STABILITY AND REACTIVITY

REACTIVITY: Can form explosive mixture with air.

CONDITIONS TO AVOID: Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.

INCOMPATIBILITIES: metals, oxidizing materials

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

May produce irregular heart beat and nervous symptoms.

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LD50 Oral Rat 1890 mg/kg 4 hours
LC50 Inhalation Rat 3780 mg/kg 1hours
Vapor

12. ECOLOGICAL INFORMATION

When discharged in large quantities may contribute to the greenhouse effect.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

UN Nr 3252
Class/Div 2.1
ADR/RID Item Nr 2, 2°F
ADR/RID Hazard Nr 23
Labelling ADR Label 2: flammable gas

Other transport information

Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers ensure that they are firmly secured and:

- cylinder valve is closed and not leaking
- valve outlet cap nut or plug (where provided) is correctly fitted
- valve protection device (where provided) is correctly fitted
- there is adequate ventilation.
- compliance with applicable regulations.

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15. REGULATORY INFORMATION

Number in Annex I of Dir 67/548	Not included in Annex I.
EC Classification	F; R10
-Symbols	F: flammable
Labelling of cylinders	
-Symbols	Label 2: flammable gas
-Risk phrases	R10 flammable.
-Safety phrases	S9 Keep container in well ventilated place. S16 Keep away from ignition sources - No smoking. S33 Take precautionary measures against static discharges.

16. OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

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