

Section 1: Product and Company Identification

Advanced Specialty Gases
135 Catron Dr. Reno, NV 89512
775-356-5500

IN CASE OF EMERGENCY CALL CHEMTREC: 1-800-424-9300

Product Code: Difluoromethane (R-32)

Section 2: Hazards Identification



Danger

Hazard Classification:

Flammable (Category 1)
Gases Under Pressure

Hazard Statements:

Contains gas under pressure; may explode if heated
Extremely flammable gas

Precautionary Statements

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Response:

Eliminate all ignition sources if safe to do so.
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

Storage:

Protect from sunlight.
Store in well-ventilated place.

Section 3: Composition/Information on Ingredients

CAS #
75-10-5

Chemical Substance	Chemical Family	Trade Names
METHYLENE FLUORIDE	Refrigerants	chlorodifluoromethane, difluoroethane, chlorotetrafluoroethane

Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Flush skin with warm water.	Flush eyes with large amounts of warm water for at least 15 minutes	Unlikely	Move to fresh air	Not available

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Use carbon dioxide, or dry foam.	Not available	<ul style="list-style-type: none"> ▪ Not available ▪ Not available ▪ Not available ▪ Not available

Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment
Always wear recommended personal protective equipment	Not available	Stop leak if without risk and provide ventilation.

Methods for Cleanup	Other Information
Not available	Not available

Section 7: Handling and Storage

Handling	Storage
Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 125F (52C). Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods.	Do not get liquid in eyes, on skin, or clothing. Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Open valve slowly. Close cylinder valve after each use; keep closed even when empty. If valve is hard to open, discontinue use and contact your supplier.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines
AIHA WEEL (United States, 10/2011). TWA: 1000 ppm 8 hours

Engineering Controls

No specific controls are needed.

Eye Protection	Skin Protection	Respiratory Protection
Wear safety glasses for normal conditions	General work clothing and leather gloves would be sufficient	Not available

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Gas	Colorless	Colorless	Not available	Gas	Odorless	Not available

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Not available	Not available	6854.88 (log = 3.84) (estimated from water solubility)	530C (986F)	33%	13%

Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
-51.6C (-60.9F)	-136C (-212.8F)	12825 mmHg @ 25 C	1.8 (Air=1)	Not available	>1.68 g/l	Not available	Not available	Not applicable	Not available

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
52.03	C-H2-F2	Not available	Not available	Not available	Not available	Not available

Section 10: Stability and Reactivity

Stability	Conditions to Avoid	Incompatible Materials
Stable under normal conditions	Stable under normal conditions	Freshly abraded aluminum surfaces. Chemically active metals: potassium, calcium, powdered aluminum, magnesium and zinc

Hazardous Decomposition Products	Possibility of Hazardous Reactions
Halogens halogen acids, and possibly carbonyl halides	Will not polymerize

Section 11: Toxicology Information

Acute Effects

Oral LD50	Dermal LD50	Inhalation
Inhalation Rat 3780 mg/m 1 hours	Not available	Overexposure may cause dizziness and loss of concentration. Symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur at higher concentrations.

Eye Irritation	Skin Irritation	Sensitization
Frostbite	Frostbite	No health hazards classified.

Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not available	Not available	Not available	No data

Section 12: Ecological Information

Fate and Transport

Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: not available Invertebrate toxicity: not available Algal toxicity: not available Phyto toxicity: not available	Not available	5.38 (estimated from water solubility)	Not available

Other toxicity: not available			
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Section 13: Disposal Considerations

Disposal must comply with federal, state, and local disposal or discharge laws.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Difluoromethane (methylene fluoride)	UN3252	2.1	Not applicable	Not available	Forbidden	15	Not available

Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Difluoromethane (methylene fluoride)	UN3252	2.1	Not applicable

Section 15: Regulatory Information

U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
Not regulated.	Not regulated.	Not regulated.

SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
No	No	Yes	No	Yes

SARA 372.65

Not regulated.

OSHA Process Safety

Not regulated.

State Regulations

CA Proposition 65
Not regulated.

Canadian Regulations

WHMIS Classification
Not determined.

National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Listed on inventory.	Not listed.	Not determined.

Section 16: Other Information

NFPA Rating
HEALTH=1 FIRE=4 REACTIVITY=0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard