



Arctic Eagle 32

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 6/17/21 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Substance
Substance name : Arctic Eagle 32, R-32

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Refrigerant

1.3. Supplier

FluoroFusion Specialty Chemicals, Inc.
PO Box 1238
Clayton, NC 27528-1238
Phone: 1-919-800-0277
Fax: 1-984-232-7978
www.FluoroFusion.com
Email: info@FluoroFusion.com

1.4. Emergency telephone number

Emergency number : Contact Chemtrec at 800-424-9300 (24 hours)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable gases Category 1 H220 Extremely flammable gas
Gases under pressure Liquefied gas H280 Contains gas under pressure; may explode if heated

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H220 - Extremely flammable gas
H280 - Contains gas under pressure; may explode if heated

Precautionary statements (GHS-US) :

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
P403 - Store in a well-ventilated place
P410+P403 - Protect from sunlight. Store in a well-ventilated place

2.3. Other hazards which do not result in classification

Vapors displace air and can cause asphyxiation in confined spaces. Rapid evaporation of the liquid may cause frostbite.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%	GHS-US classification
Difluoromethane	(CAS No) 75-10-5	100	Flam Gas 1, H220 Liquefied gas, H280

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

Arctic Eagle 32

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

- Potential Adverse human health effects and symptoms : No additional information available.
- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : Extremely flammable gas.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. Eliminate every possible source of ignition. No smoking. Use spark-proof tools and explosion-proof equipment.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No smoking.

Arctic Eagle 32

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use. Keep in fireproof place.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.
Storage area	: Store away from direct sunlight in a dry, cool and well-ventilated area. Store in a segregated and approved area. Eliminate all ignition sources. Cylinder temperatures should not exceed 52°C. Protect cylinder and its fittings from physical damage. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Difluoromethane (75-10-5)		
AIHA	WEEL TWA (ppm)	1000 ppm

8.2. Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Not required under normal conditions. If concentrations exceed exposure limits, use NIOSH approved respirator.

Thermal protection:

If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperatures of materials.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Color	: Colorless
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: -136.0 °C
Freezing point	: No data available
Boiling point	: -51.6 °C
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Extremely flammable gas.
Vapor pressure	: 12,600 mm Hg at 25 °C
Relative vapor density at 20 °C	: No data available
Relative density	: No data available

Arctic Eagle 32

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Lower and upper Explosion limits	: Lower: 13 % Upper: 33 %
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

Gas group	: Liquefied gas
-----------	-----------------

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Under normal conditions of storage and use product is stable. Extremely flammable gas.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks. Do not allow gas to accumulate in low or confined areas.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Halogenated compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
----------------	------------------

Difluoromethane (75-10-5)	
LC50 inhalation rat (mg/l)	1890 g/m ³ (Exposure time: 4 h)
ATE US (vapors)	1890 mg/l/4h
ATE US (dust, mist)	1890 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.

Arctic Eagle 32

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 12: Ecological information

12.1. Toxicity

No additional information available.

12.2. Persistence and degradability

R-32

Persistence and degradability	Not established.
-------------------------------	------------------

12.3. Bioaccumulative potential

R-32

Bioaccumulative potential	Not established.
---------------------------	------------------

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN3252 Refrigerant gas R 32, 2.1
UN-No.(DOT) : UN3252
Proper Shipping Name (DOT) : Refrigerant gas R 32
Class (DOT) : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115
Hazard labels (DOT) : 2.1 - Flammable gas



DOT Packaging Non Bulk (49 CFR 173.xxx) : 302
DOT Packaging Bulk (49 CFR 173.xxx) : 314;315
DOT Special Provisions (49 CFR 172.102) : T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx) : 306
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg
DOT Vessel Stowage Location : D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"
Emergency Response Guide (ERG) Number : 115
Other information : No supplementary information available.

Arctic Eagle 32

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

TDG

No additional information available

Transport by sea

No additional information available.

Air transport

No additional information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

R-32

SARA Section 311/312 Hazard Classes

Flammable
Gas under pressure

Difluoromethane (75-10-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available.

EU-Regulations

Difluoromethane (75-10-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Difluoromethane (75-10-5)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

⚠ WARNING: This product can expose you to chloroform, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov.

SECTION 16: Other information

Other information : None.

Full text of H-phrases:

H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated

SDS US (GHS HazCom 2012)

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 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.