



Material Safety Data Sheet

1. Product and Company Identification

Product name : **1,1,1,3,3,3-Hexafluoropropane**

Chemical formula : F3-C-C-H2-C-F3

Synonyms : Propane,1,1,1,3,3,3-Hexafluoro-; 2-2-Dihydroperfluoropropane;
Bistrifluoromethylmethane; HFC 236FA; HCFC 236FA; R 236FA; C3H2F6

Company : Specialty Gases of America, Inc
6055 Brent Dr.
Toledo, OH 43611

Telephone : 419-729-7732

Emergency : 800-424-9300

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
1,1,1,3,3,3-Hexafluoropropane	690-39-1	100%

3. Hazards Identification

Emergency Overview

May cause difficulty in breathing.
Containers may rupture or explode if exposed to heat.

Potential Health Effects

Inhalation : Headache, fatigue, dizziness, nausea, vomiting, disorientation, emotional disturbances, difficulty breathing, tingling sensation, irregular heartbeat, convulsions, coma, suffocation

Eye contact : Frostbite.

Skin contact : Frostbite.

Ingestion : Ingestion of gas is unlikely.

Chronic Health Hazard : None.

4. First Aid Measures

General advice : None.

Eye contact : Contact with liquid: Immediately flush eyes with plenty of water for at least 15 minutes. Then 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.

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

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.

5. Fire-Fighting Measures

- Suitable extinguishing media : Use extinguishing agents appropriate for surrounding fire.
- Specific hazards : Negligible fire hazard. Containers may rupture or explode if exposed to heat.
- Fire fighting : Move container from fire area if it can be done without risk. Cool containers with water spray until well after fire is out. Use extinguishing agents appropriate for surrounding fire. Apply water from a protected location or from a safe distance. Do not get water directly on material. Reduce vapors with water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.
- Thermal decomposition products : Combustion: oxides of carbon, hydrogen fluoride

6. Accidental Release Measures

- Occupational spill/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.
- Additional advice : None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Keep containers tightly closed. Avoid direct sunlight. Store in a cool, dry place. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure limits

1000 ppm TWA

Engineering measures/Ventilation

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Personal protective equipment

- Respiratory protection : Under conditions or 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.
For unknown concentrations or immediately dangerous to life or health – Any supplied-air respirator with a full facepiece that operated in a pressure-demand or other positive pressure mode in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
- Hand protection : For the liquid: Wear insulated gloves.
- Eye protection : For the gas: Eye protection is not required, but recommended. For the liquid: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and body protection : For the gas: Protective clothing is not required. For the liquid: Wear appropriate, protective, cold insulating clothing.

9. Physical and Chemical Properties

Form : Liquefied Gas.
Color : Colorless.
Odor : Not available.
Molecular weight : 152.05
Vapor pressure : 1956 mmHg @ 25°C
Vapor density : 5.3 calculated (air = 1)
Specific gravity : 1.371 (water = 1)
Boiling point : 29.5 to 31°F (-1.4 to -0.7°C)
Melting point : -144 to -136°F (-98.0 to -93.6°C)
Water solubility : Insoluble.
Evaporation rate : Not applicable.

10. Stability and Reactivity

Stability : Stable at normal temperature and pressure.
Conditions to avoid : Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.
Materials to avoid : Bases, alkali metals, oxidizing materials.
Hazardous decomposition products : Thermal decomposition products: oxides of carbon, hydrogen fluoride.

11. Toxicological Information

The components of this material have been reviewed in various sources and no endpoints have been identified.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

Additional Data

Stimulants such as epinephrine may induce ventricular fibrillation.

12. Ecological Information

No LOLI ecotoxicity data are available for this product's components.

13. Disposal Considerations

Waste from residues / unused products : Dispose in accordance with all applicable regulations.
Contaminated packaging : Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name : Liquefied gas, n.o.s. (Contains: 1,1,1,3,3,3-HEXAFLUOROPROPANE)

Class : 2.2
UN/ID No. : UN3163
Labeling : Non-flammable Gas

15. Regulatory Information

U.S. Federal Regulations

None of this product's components are listed under SARA Section 302/304 (40 CFR 355 Appendix A), SARA 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA 311/312

Acute: Yes
Chronic: No
Fire: No
Reactive: No
Pressure: Yes

U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ, PA, or RI.

Not regulated under California Proposition 65.

16. Other Information

Prepared by : Specialty Gases of America, Inc.
For additional information, please visit our website at www.americangasgroup.com.