
"SUVA" 236fa
CEF236FA Revised 20-Feb-08 Printed 02/21/2008

Substance ID :130000000816

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

Corporate MSDS Number : DU009026
CAS Number : 690-39-1
Formula : CF3-CH2-CF3
CAS Name : 1,1,1,3,3,3-hexafluoropropane

Product Use

Flame Retardant/Fire Extinguishing Agent

Tradenames and Synonyms

HEXAFLUOROPROPANE
CC0610
Refrigerant

Company Identification

MANUFACTURER/DISTRIBUTOR
E.I. du Pont Canada Company
P.O. Box 2200
Streetsville
Mississauga, Ontario L5M 2H3

PHONE NUMBERS
Product Information : 1-800-387-2122
Medical Emergency : 1-800-441-3637 (24 hours)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
1,1,1,3,3,3-HEXAFLUOROPROPANE	690-39-1	99-100 %

HAZARDS IDENTIFICATION

Potential Health Effects

Inhalation of high concentrations of HFC-236fa, such as those that may be achieved under conditions of abuse or inappropriate use, may cause adverse central nervous system and cardiac effects. The effects may include dizziness, lightheadedness, confusion, weakness and unconsciousness,

and in extreme cases the heart may become sensitized to epinephrine and may result in death without warning.

HFC-236fa may cause frostbite if liquid or escaping vapor contacts the skin.

HFC-236fa may cause "frostbite-like" effects if the liquid or escaping vapors contact the eyes.

Ingestion is not considered a probable route of exposure for HFC-236fa.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

INHALATION

If inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

Flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

Ingestion is not considered a potential route of exposure.

Notes to Physicians

THIS MATERIAL MAY MAKE THE HEART MORE SUSCEPTIBLE TO ARRHYTHMIAS. Catecholamines such as adrenaline, and other compounds having similar effects, should be reserved for emergencies and then used only with special caution.

FIRE FIGHTING MEASURES

Flammable Properties

Will not burn. Not a fire or explosion hazard. "FE-36" is used as a fire extinguishant. Hazardous gas/vapor produced in fire is hydrogen fluoride.

Extinguishing Media

Use media appropriate for surrounding material.

Fire Fighting Instructions

(For example: when "FE-36" is exposed to fire from surrounding material) - Wear self-contained breathing apparatus. Wear full protective equipment. Cool tank/container with water spray.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Keep upwind of leak - evacuate until gas has dispersed.

Accidental Release Measures

Ventilate area before reentering.

HANDLING AND STORAGE

Handling (Personnel)

Do not breathe gas. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

Handling (Physical Aspects)

Keep away from sparks, flames and hot (glowing) surfaces.

Storage

Valve protection caps and valve cutlet threaded plugs must remain in place unless container is secured with valve outlet piped to use point. Do NOT drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Never attempt to lift cylinder by its cap. Use a pressure reducing regulator when connecting cylinder to lower pressure (>3000 psig) piping or systems. Do NOT heat

cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Separate full containers from empty containers. Storage area temperatures should not exceed 125 deg F (52 deg C) and should be free of combustible materials. Avoid area where salt or other corrosive materials are present. Avoid excessive inventory and storage time. Use a first-in first-out system. Keep accurate inventory records.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

Vapors of the compound are heavier than air, posing a hazard of asphyxia if they are trapped in enclosed or low places.

Personal Protective Equipment

EYE/FACE PROTECTION

Wear safety glasses or coverall chemical splash goggles.

RESPIRATORS

Wear NIOSH approved respiratory protection, as appropriate.

PROTECTIVE CLOTHING

Wear impervious clothing, such as gloves, apron, boots, or whole bodysuit as appropriate.

Exposure Guidelines

Exposure Limits
"SUVA" 236fa

PEL	(OSHA)	: None Established
TLV	(ACGIH)	: None Established
AEL *	(DuPont)	: 1000 ppm, 8 & 12 Hr. TWA
WEEL	(AIHA)	: 1000 ppm, 8 Hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	: -1.4 C (29.5 F) @ 760 mm Hg
Vapor Pressure	: 272.4 kPa @ 25 C (77 F)
Melting Point	: -98 C (-144 F)
Freezing Point	: -103 C (-153 F)
Form	: Liquefied gas
Color	: Colorless
Specific Gravity	: 1.370 gm/cc

STABILITY AND REACTIVITY

Chemical Stability

Stable.

Incompatibility with Other Materials

Incompatible with strong bases, metallic sodium, potassium, lithium.

Decomposition

Decomposes in open flames and hot (glowing) surfaces.

Hazardous gas/vapor produced is hydrogen fluoride.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

HFC 236fa

Inhalation 4 hour LC50: > 457,000 ppm in rats

Single exposure by inhalation caused narcosis and cardiac sensitization, a potentially fatal disturbance of heart rhythm associated with a heightened sensitivity to the action of epinephrine; in a cardiac sensitization screening test in dogs exposed to concentrations of 50,000 to 250,000 ppm evidence of sensitization occurred at 150,000 ppm. Repeated exposures caused a reduced startling response in rats. No other significant toxicological effects were observed. No-Observed-Adverse-Effect-Level (NOAEL): 20,000 ppm.

Developmental studies conducted in rats and rabbits at dose levels of 5000, 20,000 or 50,000 ppm produced no evidence of developmental toxicity. HFC 236fa was not uniquely toxic to the rat or rabbit conceptus. Specific studies to evaluate the effect on female reproductive performance have not been conducted; however, limited information obtained from studies on developmental toxicity do not indicate adverse effects on female reproductive performance. Tests have shown that HFC 236fa does not cause genetic damage in bacterial or mammalian cell cultures. No animal data are available to define carcinogenic effects of HFC 236fa.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

96 hour LC50 - Zebra fish: 292 mg/L
96 hour LC50 - Freshwater algae: > 186 mg/L
48 hour LC50 - Daphnia magna: 299 mg/L

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

TRANSPORTATION INFORMATION

Shipping Information

Not Regulated as a hazardous material by DOT, IMO, or IATA.

Shipping Information -- Canada

This material is Not Regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : Listed.

Canadian Regulations

This is not a WHMIS Controlled Product.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

CEPA Status : All components either on DSL, or notified.

OTHER INFORMATION

NFPA, NPCA-HMIS

NPCA-HMIS Rating

Health : 1

Flammability : 0

Reactivity : 1

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS

# Indicates updated section.

End of MSDS