
1. Chemical Product and Company Identification

Product Trade Name: INNOVERA DUSTER
Chemical Family: Ethane, 1,1-Difluoro
FSP Model No: IVR-10031, IVR-10035, IVR-51501, IVR-51505

Distributed by: Innovera®/ United Stationers Supply Co.
Deerfield, IL 60015

Phone: 1-866-756-4676

Chemical Manufacturer: Dupont

Address: 1007 Market Street
Wilmington, DE 19898 USA

Phone: 1-800-441-7515

Product Manufacturer: Falcon Safety Products, Inc.

Address: 25 Imclone Drive
Branchburg, NJ 08876

Phone: 1-908-707-4900

Emergency Telephone USA: (800) 498-7192

2. Composition/Information on Ingredients

Chemical Name	Wt.%Range	TLV Units
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1,1-Difluoroethane	100%	
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CAS #75-37-6

3. Hazard Identification

Potential Health Effects:

Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death.

Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Liquid contact can cause frostbite.

Human Health Effects:

Higher exposures may lead to irritation of nose, throat, and lungs with cough, difficulty breathing or shortness of breath, temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation, or abnormal kidney function as detected by laboratory tests. Gross overexposure may be fatal.

Medical Conditions Aggravated by Exposure:

Individual with preexisting diseases of the central nervous, cardiovascular system, lungs, or kidneys may have increased susceptibility to the toxicity of excessive exposures.

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.

4. First Aid Measures

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

- Skin Contact:** Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.
- Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.
- Ingestion:** Ingestion is not considered a potential route of exposure.

Notes to Physicians:

Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution only in situations of emergency life support.

5. Firefighting Measures

- Flash Point:** <-50°C (<-58°F)
- Auto ignition Temperature:** 454°C (849°F)
- Flammable Limits in Air:** LEL/UEL: 3.9-16.9 (% by volume)
- Fire and Explosion Hazards:** Aerosol cans may erupt with force at temperatures above 49° C (120° F) HFC 152a fire decomposition by-products will include hydrofluoric acid, and possibly carbonyl fluoride. Avoid contact with these materials, which are toxic and irritating. Evacuate personnel immediately in the event of a fire involving HFC-152a.
- Extinguishing Media:** Water Spray, Water fog, Dry Chemical, Carbon dioxide. "Alcohol" foam.

Special Firefighting Procedures:

Cool cans with water spray. If gas exiting can ignites, stop flow of gas. Do not put out fire unless leak can be stopped. Self-contained breathing apparatus (SCBA) is required if containers rupture and contents are released under fire conditions.

National Fire Protection Association (NFPA 30B)

Level 1 Aerosols (lowest flammability rating)

6. 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.

- Spill or Leak:** Although the chances of a large spill or leak are unlikely in aerosol containers. If a spill can cause a concentration in excess of 1,000 ppm, stop flow and remove ignition sources. Evacuate area. Ventilate area, especially low places where heavy vapors might collect. Wear self-contained breathing apparatus (SCBA).

If this product is spilled and not recovered, or is recovered as a waste for treatment or disposal, the CERCLA Reportable Quantity is 100 lbs. (Release of an unlisted Hazardous Waste characteristic of ignitability).

7. Handling and Storage

Avoid breathing vapors or mist. Keep containers closed. Use only with adequate ventilation. Avoid repeated or prolonged contact with eyes, skin or clothing. Wash thoroughly after handling. Do not store in direct sunlight. Store in cool dry place, away from heat, sparks or flames which may generate toxic decomposition products. Vapors are heavy and may concentrate in low poorly ventilated areas.

8. Exposure Controls/Personal Protection

- Engineering Controls:** Ground all equipment and cylinders before use. Do not use near any spark producing electrical devices such as paper shredders.
- Respiratory Protection:** Use only with adequate ventilation. Keep container closed. Use approved NIOSH self-contained or supplied air respirators for emergencies and in situations where air may be displaced by vapors.
- Eye Protection:** Use chemical protective safety glasses.
- Protective Clothing:** Where there is potential for skin contact, use appropriate impervious gloves, apron, pants and jacket.
- Exposure Guidelines:** Applicable Exposure Limits.

Difluoroethane:

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

NFPA, NPCA-HIMIS RATING:

Health	1	
Flammability	4	
Reactivity	1	

Personal Protection rating to be supplied by user depending on use conditions.

9. Physical and Chemical Properties

Physical Form:	Liquefied Gas
Odor:	Slight Ethereal
Boiling Point:	-25°C (-13°F)
pH:	Not Applicable
Solubility in Water:	0.28 WT% @ 25°C (77°F) and 87 psia.
Specific Gravity:	0.909
% Volatile by Weight:	100
Vapor Pressure:	87 psia at 25°C (77°F)
Density:	.90 g/cc at 25°C (77°F) - Liquid
Vapor Density (air=1):	2.4 (Air = 1.0) at 25°C (77°F)
Color:	Clear, colorless

10. Reactivity

- Chemical Stability:** Material is stable. However, avoid open flames and high temperatures.
- Hazardous Polymerization:** Will not occur.
- Incompatibilities:** Incompatible with alkali or alkaline earth metal –powdered Al, Zn, Be, etc.
- Decomposition Products:** Decomposition products are hazardous. This material can be decomposed by **high temperatures** forming hydrofluoric acid and possibly carbonyl fluoride

11. Toxicological Information

Animal Data:

Oral ALD: >1500 mg/kg in rats Inhalation ALC, 4 hr: 383,000 ppm in rats HFC-152a has not been tested for skin and eye irritancy, nor for animal sensitization. Ingestion of single high doses of HFC-152a caused weight loss and lethargy.

Carcinogenicity:

Inhalation of high levels of HFC-152a caused labored breathing, lung irritation, lethargy, incoordination and loss of consciousness. Cardiac sensitization occurred in dogs exposed to a concentration of 150,000 ppm in air and given an intravenous epinephrine challenge. Repeated inhalation exposures caused increased urinary fluoride, reduced kidney weight, and reversible kidney changes. Based on an independent peer review the reversible kidney changes are considered artifacts of the tissue and slide processing and not a compound related effect. Animal testing demonstrate no carcinogenic activity nor developmental effects. No animal data are available to define reproductive effects of HFC-152a. HFC-152a has not produced genetic damage in bacterial cultures. There are reports indicating that HFC-152a produced genetic damage in some mammalian cell culture tests. A weak genotoxic effect in germ cells of *Drosophila melanogaster* has been reported. It has not been tested in animals.

12. Ecological Information

Aquatic Toxicity:

Not Available

13. Disposal Considerations

Waste Disposal: Reclaim by distillation, incinerate, or remove to a permitted waste facility. Comply with Federal, State, and local regulations.

This material may be a RCRA Hazardous waste upon disposal due to the ignitability characteristic.

14. Transportation Information

Transport for Aerosol Packaging:

Shipping Information

DOT/IMO

Proper Shipping Name : 1,1-DIFLUOROETHANE

Hazard Class : 2.1

UN No. : 1030

DOT/IMO Label : FLAMMABLE GAS

Special Information : CARGO AIRCRAFT ONLY

NOTE: Falcon Safety Products has been granted a DOT exemption that allows this product to be shipped similar to a Consumer Commodity (ORM-D). A copy of the DOT exemption can be obtained by calling Falcon Safety Products, Inc at 908-707-4900.

15. Regulatory Information

U.S. Federal Regulations

TSCA Inventory Status : Reported/Included.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes

Chronic : No

Fire : Yes

Reactivity : No

Regulatory Information continued.....

Pressure : Yes

LISTS:

SARA Extremely Hazardous Substance -No

CERCLA Hazardous Substance -(*)

SARA Toxic Chemicals -No

*See Disposal Information

"DYMEL" 152a is a flammable gas as defined by OSHA in 29CFR 1910.1200(c). Use of this product may require compliance with 29CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals.

This information must be included in all MSDSs that are copied and distributed for this material.

California V.O.C. Data: *This product contains 0 grams total VOC per liter.*

16. Other Information

NFPA, NPCA-HMIS

NPCA-HMIS Rating

Health : 1

Flammability : 4

Reactivity : 1

WHIMIS - Canada

Class A - Compressed Gas


Class B-1 - Flammable Gas

CEPA DSL: difluoroethane

Personal Protection rating to be supplied by user depending on use

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Signature

Dermot McLeer

Printed Name

Technical Manager

Title

08/15/07

Revision Date