

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	Innovaera Duster
Synonym(s)	IVR51501, IVR51505, IVR51508 IVR10031, IVR10035
CAS #	75-37-6
Product use	Dust control
Manufacturer	Falcon Safety Products, Inc. 25 Imclone Drive Branchburg, NJ 08876 US Phone: 1-908-707-4900

2. Hazards Identification

Emergency overview	DANGER FLAMMABLE GAS. MAY CAUSE FLASH FIRE. Contents under pressure. Containers may explode when heated.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Inhalation.
Eyes	Contact with liquid may cause frostbite.
Skin	Contact with liquid may cause frostbite.
Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness). Vapors may cause dizziness or suffocation.
Ingestion	Not a normal route of exposure.
Target organs	Eyes. Skin. Respiratory system.
Chronic effects	Prolonged or repeated exposure can cause drying, defatting and dermatitis.
Signs and symptoms	Symptoms may include redness, edema, drying, defatting and cracking of the skin.
OSHA Regulatory Status	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Potential environmental effects	Not available

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
1,1-Difluoroethane	75-37-6	60 - 100

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Inhalation	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.
Ingestion	Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
General advice	Do not puncture or incinerate container. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Flammable by WHMIS/OSHA criteria. Containers may explode when heated.
Extinguishing media	
Suitable extinguishing media	Do not extinguish burning gas if flow cannot be shut off immediately. Use water spray or fog nozzle to keep cylinder cool Small Fires: Dry chemical. Carbon dioxide. Large Fires: Water spray. Fog.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Cool containers with flooding quantities of water until well after fire is out.
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Fluoride gases.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Remove sources of ignition. Although the chance of a significant spill or leak is unlikely in aerosol containers, in the event of such an occurrence, absorb spilled material with a non-flammable absorbent such as sand or vermiculite.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Avoid contact with eyes and skin. Avoid breathing mists or aerosols of this product. Use only with adequate ventilation.
Storage	Keep away from heat, open flames or other sources of ignition. Do not store at temperatures above 49 °C (120.2°F). Keep out of reach of children.

8. Exposure Controls / Personal Protection

Exposure limits	
Ingredient(s)	Exposure Limits
1,1-Difluoroethane	ACGIH-TLV Not established OSHA-PEL Not established
Engineering controls	Use only under good ventilation conditions or with respiratory protection.
Personal protective equipment	
Eye / face protection	Wear safety glasses with side shields.

Hand protection	If there is constant skin contact, rubber gloves are recommended.
Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands and face before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear
Color	Colorless
Form	Liquefied gas
Odor	Slight ethereal.
Odor threshold	Not available
Physical state	Gas
pH	Not applicable
Melting point	Not available
Freezing point	Not available
Boiling point	-13.00 °F (-25 °C)
Pour point	Not available
Evaporation rate	Not available
Flash point	-58.00 °F (-50 °C)
Auto-ignition temperature	849.20 °F (454 °C)
Flammability limits in air, lower, % by volume	3.9
Flammability limits in air, upper, % by volume	16.9
Vapor pressure	599.43 KPa @25°C
Vapor density	2.4 @25°C (air=1)
Specific gravity	0.91
Relative density	0.9 g/cc @25°C
Octanol/water coefficient	Not available
Solubility (H2O)	Slightly
Viscosity	Not available
Percent volatile	100

10. Stability and Reactivity

Reactivity	None known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Aerosol containers are unstable at temperatures above 49°C (120.2°F).
Incompatible materials	Alkaline materials. Alkaline earth metals.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Fluoride gases.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
1,1-Difluoroethane	> 64000 ppm rat

Component analysis - Oral LD50

Ingredient(s)	LD50
1,1-Difluoroethane	1500 mg/kg rat

Effects of acute exposure

Eye	Contact with liquid may cause frostbite.
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Skin	Contact with liquid may cause frostbite.
Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness). Vapors may cause dizziness or suffocation.
Ingestion	Not a normal route of exposure.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	Non-hazardous by WHMIS/OSHA criteria.
Mutagenicity	Non-hazardous by WHMIS/OSHA criteria.
Reproductive effects	Non-hazardous by WHMIS/OSHA criteria.
Teratogenicity	Non-hazardous by WHMIS/OSHA criteria.
Name of Toxicologically Synergistic Products	Not available

12. Ecological Information

Ecotoxicity	Not available
Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Mobility in environmental media	Not available
Environmental effects	Not available
Aquatic toxicity	Not available
Partition coefficient	Not available
Chemical fate information	Not available
Other adverse effects	Not available

13. Disposal Considerations

Disposal instructions	Review federal, state/provincial, and local government requirements prior to disposal. Do not puncture or incinerate container.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

Proper shipping name	1,1-Difluoroethane
Hazard class	2.1
UN number	1030

Additional information:

Packaging exceptions

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.



Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name 1,1-Difluoroethane
Hazard class 2.1
UN number 1030

Additional information:

Packaging exceptions Limited quantity (containers up to 125mL)

NOTE: Falcon Safety Products has been granted Equivalency Certificate SU 9211 (Ren.1) by the TCSS, TDGD to offer for transport by road, rail, and marine.



IATA/ICAO (Air)

Basic shipping requirements:

Proper shipping name 1,1-Difluoroethane
Hazard class 2.1
UN number 1030

Additional information:

Maximum net quantity packaging Cargo aircraft only – 150 kg maximum
(Forbidden on passenger aircraft)

Maximum net quantity packaging cargo only 150 kg



IMDG (Marine Transport)

Basic shipping requirements:

Proper shipping name 1,1-DIFLUOROETHANE
Hazard class 2.1
UN number 1030



15. Regulatory Information

Canadian federal regulations

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

WHMIS status

Controlled

WHMIS classification

Class A - Compressed Gas, Class B - Division 1 - Flammable Gas

WHMIS labeling



Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

US Federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - Massachusetts - Right To Know List

1,1-Difluoroethane 75-37-6 Present

U.S. - New Jersey - Right to Know Hazardous Substance List

1,1-Difluoroethane 75-37-6 sn 0715

Inventory name

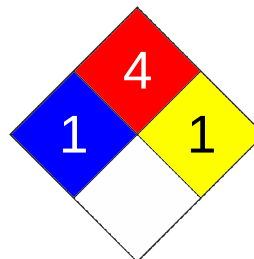
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 1
Flammability	4
Physical Hazard	1
Personal Protection	X

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Prepared by Falcon Safety Products, Inc.

Other information For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.