

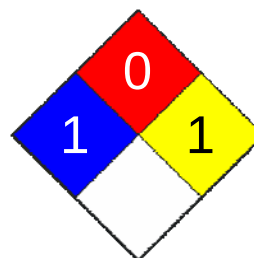
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name innovera Duster – Non-Flammable
Synonym(s) Product code 1: IVR51511
Product code 2: IVR51515
Product code 3
Product code 4
Product code 5
CAS # Mixture
Product use Dust control
Manufacturer Falcon Safety Products, Inc.
25 Imclone Drive
Branchburg, NJ 08876 US
Phone: 1-800-498-7192
Supplier United Stationers
One Pkwy North, Suite 100
Deerfield, IL 60015 US
Phone 1-847-627-7000

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

Health	/ 1
Flammability	0
Physical Hazard	1
Personal Protection	X



2. Hazards Identification

Emergency overview CAUTION
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.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Ethane, 1,1,1,2-tetrafluoro-	811-97-2	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	Not flammable by WHMIS/OSHA criteria. Containers may explode when heated.
Extinguishing media	
Suitable extinguishing media	Small Fires: Carbon dioxide. Dry chemical.
	Large Fires: Water spray. Fog. Foam.
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. 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.
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	Avoid breathing mists or aerosols of this product. Use good industrial hygiene practices in handling this material.
Storage	Keep out of reach of children. Do not store at temperatures above 49 °C (120.2°F). Keep away from heat, open flames or other sources of ignition.

8. Exposure Controls / Personal Protection

Exposure limits	
Ingredient(s)	Exposure Limits
Ethane, 1,1,1,2-tetrafluoro-	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	-26.5 °C (-15.70 °F)
Flash point	None
Pour point	Not available
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	662 kPa
Vapor density	3.6 @25°C (air=1)
Specific gravity	1.21 @25°C
Octanol/water coefficient	Not available
Solubility (H2O)	Slightly
Auto-ignition temperature	> 750 °C (> 1382.00 °F)
Percent volatile	100

10. Stability and Reactivity

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.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Ethane, 1,1,1,2-tetrafluoro-	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Ethane, 1,1,1,2-tetrafluoro-	Not available

Effects of acute exposure

Eye	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.
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.
Synergistic Materials	Not available

12. Ecological Information

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

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Review federal, state/provincial, and local government requirements prior to disposal.
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	Refrigerant gas R 134a, mixture
Hazard class	2.2
UN number	3159

Additional information:

Packaging exceptions	ORM-D (applicable to containers up to 1 L)
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Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name	Refrigerant gas R 134a
Hazard class	2.2
UN number	3159
Additional information:	
Packaging exceptions	Limited quantity (containers up to 125mL)



IATA/ICAO (Air)

Basic shipping requirements:

Proper shipping name	Refrigerant gas R 134a mixture
Hazard class	2.2
UN number	3159
Additional information:	
Maximum net quantity packaging	75 kg



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.
US Federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. CERCLA/SARA Hazardous Substances - Not applicable.
Occupational Safety and Health Administration (OSHA)	
29 CFR 1910.1200 hazardous chemical	Yes
CERCLA (Superfund) reportable quantity	None
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No 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
WHMIS status	Controlled
WHMIS classification	Class A - Compressed Gas

WHMIS labeling



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. - Minnesota - Hazardous Substance List

Ethane, 1,1,1,2-tetrafluoro- 811-97-2 Present

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

Ethane, 1,1,1,2-tetrafluoro- 811-97-2 sn 2744; sn 2745 (flammable)

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

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

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Other information

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