MATERIAL SAFETY DATA SHEET
Essentially Similar to U.S. Department of Labor Form OSHA
Revised 07/11/2013
HMIS Health-1 Flammability-4 Physical Hazard -1 Personal Protection x

SECTION I-Product Information

Manufacturer: A.V.W. Inc.
24 Hour Emergency Phone Number: 800-424-9300
Product Name: Blow Off Air Duster 152a
Synonym(s): Blow Off Air Duster

Blow Off Auto Duster	3.5oz
	8oz
Blow Off 152a Duster	3.5oz
	8oz
	10oz
Trade Name:	152a
Chemical Name:	Ethane, 11,-Difluoro
FSPID:	Front 152a
Model No:	Blow Off 3.5 oz, Blow Off 8 oz, Blow Off 10oz.
Product Use:	Cleaning

SECTION II-Hazardous Identification

Emergency Overview	DANGER Flammable gas. 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, dryness of the skin.
Odor, Color, Grade	Clear, colorless with slight ethereal odor.
General Physical Form	Gas

Immediate health, physical, and environmental hazards:
Closed containers exposed to heat from fire may build pressure and explode. May cause frostbite. May cause target organ effects.

SECTION III-Composition on Ingredients

Component	CAS # 75-37-6 % by Wt 100% 1, 1-DIFLUOROETHANE

SECTION IV-First Aid Measures

Skin:	Flush with cool water. Wash affected area with soap and water. If signs/symptoms persist, get medical attention.
Eye contact:	Immediately flush with large amounts of cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
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.

SECTION V-Firefighting Measures

Flammable Properties	Flammable by WHMIS/OSHA criteria. Containers may explode when heated. Autoignition temperature 849 °F
Flash Point:	< 50 °F (Details: consumer aerosol does not exhibit a flame projection, therefore it is not determined to be flammble as defined in 16 CFR, Section 1500.3(c) (6) (viii).
Flammable Limits-LEL	3.9% volume
Flammable Limits-UEL	16.9% volume
Extinguishing media	
Suitable extinguishing media	Small Fires: Dry chemical. Carbon dioxide. 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. 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 combustionproducts	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

SECTION VI-Accidental Release Measures

Accidental Release Measures	Refer to other sections of this MSDS for information regarding physical and health hazard, respiratory protection, ventilation, and personal protective equipment. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. Close cylinder. If the cylinder can't be closed, place in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors. Dispose of collected material as soon as possible.
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.

SECTON VII-Handling and Storage

Handling:
Do not eat, drink or smoke when using this product.
Wash exposed areas thoroughly with soap and water.
Contents may be under pressure, open carefully.
Keep away from heat, sparks, open flam, pilot lights and other sources of ignition.
No smoking while handling this material. Avoid eye contact with vapors, mists, or spray.
Avoid breathing mists or aerosols of this product.
Use good industrial hygiene practices in handling this material.

Storage:
Do not eat, drink or smoke when using this product.
Wash exposed areas thoroughly with soap and water.
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.
Store away from acids. Keep container in well-ventilated area.

SECTION VIII-Exposure Controls/Personal Protection

Engineering Controls:
Do not use in a confined area or areas with little or no air movement.
Use general dilution ventilation and/or control mist, vapor, or spray.
If ventilation is not adequate, use respiratory protection equipment

Personal protective equipment

Respiratory protection:
Do not breathe vapors. Use with adequate ventilation. Keep container closed.
For emergencies select one of the following NIOSH approved respirators based on airborne concentration of
contaminants and in accordance with OSHA regulations:
Half face piece or full face pressure demand self-contained breathing apparatus.

Hand protection:
If there is constant skin contact, rubber gloves are recommended.

Eye/Face protection:
Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields.

Skin protection:
Wear insulated gloves to protect against frostbite.

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 product.

SECTION IX-Physical and Chemical Properties

Form: Liquefied gas
Form: colorless
Odor: slight, ethereal

Odor threshold:	Not available
Ph:	Not available
Physical state:	Gas
Melting point:	Not available
Melting point:	Freezing point:
Boiling point/ Boiling range:	-25°C (-13.00 °F)
Flash point:	-50°C (-58.00 °F)
Vapor Pressure:	599.43 kPa @25°C
Pour Point:	Not Available
Specific gravity:	0.91
Relative density:	0.9 g/cc @2°C
Vapour density:	2.4 @25°C
Flammability limits in air, Lower, % by volume	3.9
Flammability limits in air, upper, % by volume	16.9
Octanol.wate coefficient	Not available
Solubility (H20)	Slightly
Auto-ignition temperature	454 °C (849.20 °F)
Percent volatile:	100

SECTION X-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).
Incompatibility:	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.

SECTION XI-Toxicological Information

Eye irritation	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

SECTION X11-Ecological Information

Ecotoxicity	Not available
Environmental effects Product contains no ozone depleting CFCs	
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

SECTION X111-Disposal Considerations

Waste Code:	Not available
Disposal instructions	Review federal, state/provincial, and local government requirements prior to disposal.
Waste from residues/unused	Not available
Contaminated packaging	Not available

SECTION XIV – Transportation Information

U.S Department of Transportation (DOT) International Maritime Organization (IMO)

Basic shipping requirements:	1, 1-Difluoroethane

Transportation of Dangerous Goods (TDG – Canada)

Hazard class	2.1
UN number	1030
Additional Information:	
DOT/IMO Label:	FLAMMABLE GAS
Special Information:	CARGO AIRCRAFT ONLY

IATA/CAO (Air)

Basic shipping requirements:	
Proper shipping name:	1, 1-Difluoroethane
Hazard class:	2.1
UN number:	1030
Additional information:	
Maximum net quantity	Cargo aircraft only-150 kg maximum
Packaging	(Forbidden on passenger aircraft)

SECTION XV-Regulatory Information

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous	Yes
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 substances	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, Class B – Division 1 – Flammable Gas	
State regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.	

Inventory name	Inventory
Country(s) or region	
Canada	Domestic Substances List (DSL)
Canada	Non-Domestic Substances List (NDSL)
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory

SECTION XVI-Other Information

NFPA Hazard Classification

Health:	1
Flammability:	4
Reactivity:	1
Physical hazard:	0

HMIS Hazard Classification

Health:	1
Flammability:	4
Reactivity:	1
Protection:	X – See PPE section