Safety Data Sheet

1 Identification

GHS Product Identifier

Product Form:	Aerosol
Trade Name:	Wolo iHorn 152a
Product Numbers:	HR-497
CAS No.:	75-37-6
EC No.:	200-866-1

Other means of identification

Synonyms: 1,1-difluoroethane / 1,1-difluoroethane (refrigerant gas R152a) / HFC-152a

Recommended use of the chemical and restriction on use

Use of Substance/Mixture: Hand held signaling device; Safety Horn

Supplier's details

Wolo Manufacturing Corp.
Deer Park, NY 11729

www.wolo-mfg.com

Emergency phone number

CHEMTREC 24 Hour Emergency Response
USA & Canada 800-424-9300

2 Hazard(s) identification

Classification of the substance or mixture

GHS Categories

Criteria	Category	Signal Word	Pictograms
Flammable Aerosol	2	Warning	Flame
Gas Under Pressure; Liquefied Gas	Liquefied Gas	Warning	Gas Cylinder

Note 1: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity). Severity categories do not allow comparisons between classes.

GHS label elements

Warning

Flammable aerosol

Contains gas under pressure; may explode if heated

Keep out of reach of children.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Do not spray on an open flame or other ignition source.

Do not pierce or burn, even after use.

Store in a well-ventilated place.

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Other hazards which do not result in classification

HCS2012 Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Simple Asphyxiant	May displace oxygen and cause rapid suffocation.	Warning	None
Other Criteria	**Hazard Statements/Precautionary Statement**	**Signal Word**	**Pictograms**
Specific flammability	Liquid form is flammable. (Liquid form can be ejected if the aerosol can is not held upright during use).	Warning	None
Frostbite	Skin contact with liquid or aerosol jet may lead to frostbite.	Warning	None
Intentional Overexposure	Intentional misuse and inhalation abuse may cause cardiac or central nervous systems effects.	Warning	None

GHS label elements

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements above. The labeling above applies to industrial/professional products.

3 Composition/information on ingredients

Description	CAS Number	EINECS Number	%	Note
1,1-Difluoroethane, liquefied, under pressure	75-37-6	200-866-1	100	

4 First-aid measures

Description of necessary first-aid measures

Exposure Condition	*GHS Code Precautionary Statement*
IF IN EYES	P305 + P351 + P338, P336+P315
Immediate Symptoms	*frostbite, cold burns*
Response	Rinse cautiously with lukewarm water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If frostbite occurs Thaw frosted parts with lukewarm water. Do not use hot

	water. Do not rub affected area. Get immediate medical attention.
IF ON SKIN	P302 + P353, P336 + P315
Immediate Symptoms	*frostbite, cold burns*
Response	Rinse with lukewarm water. If frostbite occurs Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical attention.
IF INHALED	P304 + P340, P312
Immediate Symptoms	*signs of extreme exposure include dizziness, drowsiness, heart thumping*
Response	Remove person to fresh air and keep comfortable for breathing. If feeling unwell Call a POISON CENTRE or doctor.
IF SWALLOWED	P301 + P330, P336 + P315 (*Not a likely route of exposure under normal use*)
Immediate Symptoms	*frostbite (mouth), irritation*
Response	Rinse with lukewarm water. If frostbite occurs Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical attention.

Indication of immediate medical attention and special treatment needed, if necessary

Avoid giving catecholamine drugs (such as epinephrine) due to possible cardiac disturbances. Treat symptomatically.

5 Fire-fighting measures

Suitable extinguishing media

Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. Use water spray to cool containers.

Specific hazards arising from the chemical

Specific Hazards	The vapors are heavier than air and may displace oxygen in low-lying areas creating a suffocation hazard. Aerosol container may erupt with force at temperatures above 50 °C [122 °F]. The liquid form is flammable. Produces irritating and toxic fumes in fires or in contact with hot surfaces.
Combustion Products	Produces carbon oxides (CO, CO2), hydrofluoric acid (HF), and may produce carbonyl fluorides.

Special protective actions for fire-fighters

Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	For aerosol-can spills in confined spaces or low lying areas, leave the immediate spill area.

For very large spills, wear self-contained breathing apparatus before approaching the spill. Wear cold-insulating clothing and gloves.

If it can safely be done, extinguish open flames or remove high temperature sources to avoid producing toxic decomposition products.

Environmental precautions

Environmental Precautions Not applicable

Methods and materials for containment and cleaning up

Containment Methods No containment required under normal circumstances.

Cleaning Methods Ensure adequate ventilation, especially in low or enclosed areas. Liquid spills will turn gaseous and disperse in the local atmosphere.

Disposal Methods Dispose of spill waste according to Section 13.

7 Handling and storage

Precautions for safe handling

Prevention

Keep out of reach of children.
Avoid direct skin or eye contact with liquid or aerosol jet.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
Do not use in confined and poorly ventilated area. In cases of inadequate ventilation, wear respiratory protection.
Do not pierce or burn, even after use.

Handling

HOLD CAN UPRIGHT to avoid ejection of liquid stream during use. Do NOT spray when container is more than 45 degrees off vertical or inverted.
Wear cold-insulating gloves if exposure to liquid or aerosol jet is likely.
Wear protective eye protection.

Conditions for safe storage, including any incompatibilities

Storage Protect from sunlight. Do not expose to temperatures exceeding 50 °C [122 °F].

8 Exposure controls/personal protection

Control parameters

Substances with Occupational Exposure Limit Values

Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
1,1-difluoroethane	ACGIH U.S.A. OSHA PEL Canada	Not established Not established Not established	Not established Not established Not established

Note: The ACGIH1, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from the RTECS database2 and from suppliers' SDSs were also consulted. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

Appropriate engineering controls

Ventilation Normal ventilation is generally adequate, except in enclosed or low-lying area. Keep airborne concentrations below 0.4% [4 000 ppm] (10% of the lower explosive limit (See Section 9)). Make sure the oxygen content is not enriched.

Individual protection measures

Eye protection	Wear appropriate protective eyeglasses or chemical safety goggles. **RECOMMENDATION**: Use safety glasses with lateral protection (side shields).
Skin Protection	Wear appropriate protective clothing to prevent skin contact. **RECOMMENDATION**: Use cold insulating gloves if contact with liquid jet is likely.
Respiratory Protection	For extreme exposures, use full-face, self-contained breathing apparatus or supplied by air.

9 Physical and chemical properties

Physical and chemical properties

Physical State	Liquefied gas, in aerosol format	**Lower Flammability Limit**	3.9%
Appearance	Colorless	**Upper Flammability Limit**	16.9%
Odor	Slight, ether-like	**Vapor Pressure @20 °C** a)	607 kPa [88.0 lb/in2]
Odor Threshold	Not available	**Vapor Density**	2.3 (Air =1)
pH	Not available	**Relative Density @21 °C**	0.91
Freezing/Melting Point	-117 °C [-179 °F]	**Solubility in Water**	0.27 g/100 mL
Initial Boiling Point	-25 °C [-13 °F]	**Partition Coefficient n-octanol/water**-b)	0.75
Flash Point	-50 °C [-58 °F]	**Auto-ignition Temperature**	454 °C [849 °F]
Evaporation Rate	Not available	**Decomposition Temperature**	Not available
Flammability	Inflammable	**Viscosity @40 °C**	Not applicable

Note: Literature values are used.
a) gauge pressure
b) Octanol-water LogP value

10 Stability and reactivity

Reactivity

Not available.

Chemical stability

Chemically stable at normal temperatures and pressures

Possibility of hazardous reactions

Ignition sources, temperatures above 50 °C [122 °F], and incompatible substances.

Incompatible materials

Alkali or alkali earth metals, powdered metals, powdered metal salts

Hazardous decomposition products

Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition,

see combustion products in Section 5

11 Toxicological information

Information on the likely routes of exposure

Eyes See skin summary.

Skin Contact with the liquid may cause frostbite due to heat lost caused by rapid evaporation. Aerosol jet can reach sub-zero temperatures; exposure to jet can lead to frostbites.

Inhalation Extreme exposure due to misuse and inhalation abuse may cause central nervous system depression and irregular heartbeat.

Ingestion See inhalation and skin summaries.

Chronic Not applicable

Numerical measures of toxicity (such as acute toxicity estimates)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
1,1-difluoroethane	Not available	Not available	>437 500 ppm 4 h Rat

Note: Toxicity data from the RTECS2 and ECHA databases were consulted. The data from supplier SDSs were also consulted.

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Sensitization (allergic reactions) Based on available data, the classification criteria are not met.

Carcinogenicity (risk of cancer) Not classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP

Mutagenicity (risk of heritable genetic effects) Based on available data, the classification criteria are not met.

Reproductive Toxicity (risk to sex functions) Based on available data, the classification criteria are not met.

Teratogenicity (risk of fetus malformation) Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data the classification criteria are not met. At extreme doses, can affect the central nervous system and cardiovascular systems by inhalation. CNS anesthetic effects are based on rat studies with TCLo of 25 pph. Cardiac effects are based on exposure of ≥150 000 ppm in study on dogs. Misuse and inhalation abuse can lead to dizziness, confusion, drowsiness, unconsciousness, irregular heartbeat, heart thumping, apprehension, and weakness.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

12 Ecological information

Toxicity

Ecological classifications are based on the IMDG/GHS criteria in conjunction with ecotoxicological data from our suppliers, the European Chemical Agency database (http://echa.europa.eu), and other reliable sources.
The 1,1-difluoroethane substance is not classifiable as an environmental toxicant (with minimal LC50 96 h of 296 mg/L for unspecified fish; 147 mg/L 24 h Daphnia magna (water flea); 48 mg/L calculated for algae).

Acute Ecotoxicity Available toxicity data does not meet classification thresholds

Chronic Ecotoxicity Not data available

Biodegradability Not data available

Other adverse effects

Volatile Organic Compound VOC exempt compound by EPA and CEPA regulations

13 Disposal considerations

Disposal methods

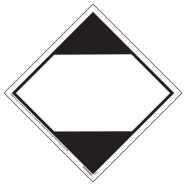
Dispose of contents in accordance with all local, regional, national, and international regulations.

14 Transport information

Department of Transportation (DOT)

In accordance with DOT UN-No. (DOT)	UN1030
Proper Shipping Name (DOT)	1,1-Difluoroethane
Transport hazard class(es) (DOT)	2.1
Packaging Exceptions	Manufacturer has been granted a DOT special permit. A copy of DOT Special Permit SP-11516 can be obtained by calling the manufacturer.

Transportation of Dangerous Goods (TDG)

In accordance with TDG UN-No.(TDG)	UN1950
Proper Shipping Name (TDG)	AEROSOLS, flammable
Class (TDG)	2.1
Hazard labels (TDG)	
Packaging Exceptions	Limited Quantity Index 1 L

Transport by sea

UN-No. (IMDG)	UN1030
Proper Shipping Name (IMDG)	1,1-DIFLUOROETHANE (REFRIGERANT GAS R 152a)
Class (IMDG)	2.1

Air transport

UN-No. (IATA)	UN1030
Proper Shipping Name (IATA)	1,1-Difluoroethane
Class (IATA)	2.1
Hazard labels	

15 Regulatory information

Safety, health and environmental regulations specific for the product in question

Canada

Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)

All hazardous ingredients are listed on the DSL/NDSL.

Hazardous Products Act (R.S.C., 1985, c. H-3)

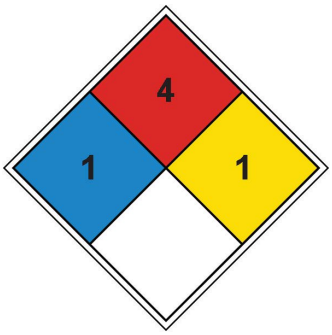
The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

USA

Other Classifications

HMIS® RATING

NFPA® 704 CODES a)



Approximate HMIS and NFPA Risk Ratings Legend:
0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)
a) Liquid classification; for aerosols, NFPA 30B flammability rating is 1.

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.
This product does not contain any class 2 ozone depleting substances.
This product does not contain substances that are listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain substances which are subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

State regulations
California
Proposition 65

WARNING: This product can expose you to chemicals including Phthalate which is known to the state of California to cause cancer, birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov

Europe

RoHS (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

WEEE (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronics equipment and is therefore not governed by this regulation.

16 Other information

Other information

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THESAFETY OFTHEGOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.