




Safety Data Sheet

Orion Safety Signal Horn

Section 1. Identification

Product Identifier	Orion Safety Signal Horn		
Synonyms	507, 507R, 508, 508R, 509, 509R, 510, 510R		
Manufacturer Stock Numbers	N/A		
Recommended use	Personal Safety - Hand held signaling device. Prior to use, read all label instructions and warnings.		
Uses advised against	Use Only as Directed - Read label instructions carefully. Keep out of reach of children. Intentional misuse by deliberately concentrating and/or inhaling contents may be fatal.		
Manufacturer Contact			
Address	Falcon Safety Products, Inc. 25 ImClone Drive Branchburg, NJ, 08876 USA		
	Phone	Emergency Phone	Fax
	(908) 707-4900	(800) 498-7192	N/A

Section 2. Hazards Identification

Classification	FLAMMABLE AEROSOLS - Category 2 GASES UNDER PRESSURE - Compressed gas
Signal Word	Warning
Pictogram	
Hazard Statements	N/A
Precautionary Statements	
Response	N/A
Prevention	Do not spray on an open flame or other ignition source.

Storage	Keep away from heat. Pressurized container: Do not pierce or burn, even after use. Do not store in enclosed vehicle. Protect from sunlight. Store in a well-ventilated place. Store at temperatures not exceeding 120 degrees F/49 degrees C
Disposal General	N/A Keep out of reach of children
Ingredients of unknown toxicity	0%
Hazards not Otherwise Classified	N/A
	No Data Available

Section 3. Ingredients

CAS	Ingredient Name	Weight %
75-37-6	Ethane, 1,1-difluoro-	100 %

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-Aid Measures

General Advice	Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt, seek medical advice.
Inhalation	Remove from exposure, lie down. Move to fresh air. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.
Skin	Take off all contaminated clothing immediately. Flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician.
Eye	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion	Is not considered a potential route of exposure.
Most important symptoms/effects, acute and delayed	Anaesthetic effects: light-headedness, irregular heartbeat with a strange sensation in the chest, heart thumping, apprehension, feeling of fainting, dizziness or weakness.
Protection of First-aiders	If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Notes to Physician	Because of possible disturbances of cardiac rhythm catecholamine drugs, such as epinephrine, which may be used in situations of emergency life support, should be used with special caution.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Water spray, water fog, dry chemical, alcohol resistant foam, carbon dioxide (CO2)
Unsuitable Extinguishing Media	No applicable data available.
Specific Hazards	Flammable. This substance's 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 this substance. Vapors may form explosive mixtures with air. Vapors are heavier than air and may spread along floors. Vapors or gases may travel considerable distances to ignition source and flash back.
Special protective equipment for firefighters	Use personal protective equipment. Wear neoprene gloves during cleaning up work after a fire. Exposure to decomposition products may be a hazard to health.
Further Information	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers/tanks with water spray.

Section 6. Accidental Release Measures

NOTE:	Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.
Safeguards (Personnel)	Evacuate personnel to safe areas. Ventilate the area. Refer to protective measures listed in sections 7 and 8.
Spill Clean-up	If this product is spilled and not recovered, or is recovered as a waste for treatment and disposal, the CERCLA Reportable Quantity is 100 lbs. (release of an Unlisted Hazardous Waste with the Characteristic of Ignitability). Evaporates. Ventilate area using forced ventilation, especially low or enclosed places where heavy vapors might collect.
Accidental Release Measures	Wear self-contained breathing apparatus (SCBA).

Section 7. Handling and Storage

Handling (Personnel)	Avoid breathing vapors or mist. Avoid contact with skin, eyes and clothing. Provide sufficient air exchange and/or exhaust in work rooms. For personal protection see section 8. Handle in accordance with good industrial hygiene and safety practice.
Handling (Physical Aspects)	Vapors are heavier than air and may spread along floors. Vapors may form flammable mixture with air. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. No sparking tools should be used. Take measures to prevent the build up of electrostatic charge. Keep away from open flames, hot surfaces and sources of ignition. When using DO NOT SMOKE. Do not use in areas where vapors may accumulate such as paper shredders.
Dust Explosion class	Not applicable
Storage	Keep container tightly closed and in a dry, well-ventilated location. Store in original container. The product has an indefinite shelf life when stored properly.
Storage Period	Recommended shelf life - 10 years provided product is stored in a dry location as directed.
Storage Temperature	Do not expose to temperatures above 120 degrees F (49 degrees C) as overheating could cause can to burst. DO NOT leave in direct sunlight or enclosed vehicle.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Ethane, 1,1-difluoro-	N/A	N/A	N/A
Personal Protective Equipment	N/A			
Engineering controls	Ensure adequate ventilation, especially in confined areas. Use respiratory protection if needed.			
Eye/Face Protection	Wear safety glasses with side shields. Direct contact with liquid may cause frostbite.			
Respiratory Protection	For rescue use self-contained breathing apparatus. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing.			
Skin and body protection	As required by employer code. If there is risk of skin contact, wear protective clothing, gloves, etc. Direct contact with liquid can cause frostbite.			
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practices.			

Section 9. Physical and Chemical Properties

Physical State	Gas
Color	Clear
Odor	slight, ether-like
Odor Threshold	No applicable data available
Solubility	Water - Slightly
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	No applicable data available
Specific Gravity	0.91
Density lbs/Gal	0.9
Pounds per Cubic Foot	N/A
Flash Point	<-58°F (<-50° C)
FP Method	N/A
Ph	Neutral
Melting Point	No applicable data available
Boiling Point	-13 °F (-25 ° C)
Boiling Range	N/A
LEL	3.9
UEL	16.9
Evaporation Rate	No applicable data available
Flammability	Flammable
Decomposition Temperature	N/A
Auto-ignition Temperature	No applicable data available
Vapor Pressure	5,960 KPa at 77F (25C)
Vapor Density	2.4 at 77F (25C) (Air=1)

Section 10. Stability and Reactivity

Reactivity	Stable under recommended storage conditions.
Chemical Stability	The product is chemically stable under recommended storage conditions.
Conditions to Avoid	Aerosol containers are unstable at temperatures above 120 degrees F/49 degrees C
Incompatible Materials	Incompatible products include Alkali metals, Alkaline earth metals, powdered metals, powdered metal salts.
Hazardous Decomposition Products	Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride.

Section 11. Toxicological Information

Component Analysis - LC50	1,1-Difluoroethane - > 64000 ppm rat
Component analysis - Oral LD50	1,1-Difluoroethane - 1500 mg/kg rat
Effects of Acute Exposure - Eye	Contact with liquid may cause frostbite
Effects of Acute Exposure - Skin	Contact with liquid may cause frostbite
Effects of Acute Exposure - Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effect (headaches, dizziness). Vapors may cause dizziness or suffocation.
Effects of Acute Exposure - Ingestion	Not a normal route of exposure
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	Not classifiable as a human carcinogen. Animal testing did not show carcinogenic effects. None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA as a carcinogen.
Mutagenicity	Animal testing did not show any mutagenic effects. Did not cause genetic damage in cultured bacterial cells. Tests on mammalian cell cultures showed mutagenic effects.
Reproductive Toxicity	No toxicity to reproduction. Animal testing showed no reproductive toxicity.
Teratogenicity	Animal testing showed no developmental toxicity.
Further Information	Cardiac sensitization threshold limit: 405000 mg/m3

Section 12. Ecological Information

Aquatic Toxicity	1,1-Difluoroethane 96 h LC50 : Fish 295.78 mg/l 96 h EC50 : Algae 47.76 mg/l 48 h EC50 : Daphnia (water flea) 146.7 mg/l
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Section 13. Disposal

Waste Disposal Methods	Comply with applicable Federal, State/Provincial and Local Regulations. May be a RCRA Hazardous waste due to the ignitability characteristic. Do not puncture or incinerate container.
Contaminated Packaging	Not Available

Section 14. Transport Information

UN Number	1030
UN Proper Shipping Name	1,1-Difluoroethane
DOT Classification	2.1
Packing Group	N/A
Packaging Exceptions	Note: Falcon Safety Products has been granted a DOT special permit. A copy of DOT Special Permit SP-11516 can be obtained by calling Falcon Safety Products, Inc. at 908-707-4900.
Transportation of Dangerous Goods (TDG - Canada)	Proper Shipping name: 1,1-Difluoroethane Hazard Class: 2.1 UN number: 1030 Packaging Exceptions: Limited quantity (containers up to 125mL)
IATA/ICAO (Air)	Proper Shipping Name: 1,1-Difluoroethane. Hazard Class: 2.1. UN Number: 1030. 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)	Proper Shipping Name: 1,1-DIFLUOROETHANE. Hazard Class: 2.1. UN Number: 1030.
Additional Information	TDG Canada: 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.

Section 15. Regulatory Information

Canadian Federal Regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS 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
TSCA	On the inventory, or in compliance with the inventory.
SARA 313 Regulated Chemical(s)	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
US Federal Regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
NJ Right to Know Regulated Chemical(s)	Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): 1,1-Difluoroethane.
California Prop. 65	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
Canada Domestic Substances List (DSL)	This product is listed on the DSL inventory list and complies with the inventory requirements administered by the governing country.

Section 16. Other Information

Revision Date

2/17/2017

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.

Prepared By

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