

# Seasense Marine/Sports Horn

## Safety Data Sheet

According to Federal Register Rules and Regulations

Revision date: 03/21/2017

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
Trade name : Seasense Marine/Sports Horn  
Model Numbers : 50074008,50074035, 50074041, 50074080  
CAS No : 75-37-6  
Formula : C2H2F4

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Aerosol Horn

#### 1.3. Details of the supplier of the safety data sheet

Unified Marine Inc.  
4488 112th Street  
Urbandale, IA 50322  
T 800-282-8725

#### 1.4. Emergency telephone number

Emergency number : 800-282-8725


### SECTION 2: Hazards identification

#### GHS Categories

Criteria	Category	Signal Word	Pictograms
Gas Under Pressure      Liquefied Gas	3	Warning	Gas Cylinder

*Note:* Non-flammable Aerosol. Not defined as flammable aerosol because heat of combustion is <20 kJ/g, ignition distance <15 cm, and it passes enclosed space ignition test according to 16 CFR 1500.3(c)(6) for the U.S. Federal Hazard Substance Act of the Consumer Product Safety Commission regulations. Not defined as a flammable aerosol under the Canadian Controlled Product Regulation SOR/88-66, 40 Division 5 criteria.

## Label Elements

<b>Signal Word</b>	<b>WARNING</b>
<b>Pictograms</b>	<b>Hazard Statements</b>
	H280: Contains gas under pressure; may explode if heated
<b>Prevention</b>	<b>Precautionary Statements</b>
P251	Do not pierce or burn, even after use.
<b>Storage</b>	<b>Precautionary Statements</b>
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C [122 °F].

## Hazards Not Otherwise Classified

HCS2012 Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Simple Asphyxiant	May displace oxygen and cause rapid suffocation.	Warning	Not applicable
Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Frostbite	Skin contact with liquid or aerosol jet may lead to frostbite	Warning	Not applicable
Specific flammability	Liquid form is flammable. (Liquid form can be ejected if the aerosol can is not held upright during use.)	Warning	Not applicable
Intentional Overexposure	Intentional misuse and inhalation abuse may cause cardiac or central nervous systems effects.	Warning	Not applicable
	May form explosive gas mixture with air.	Warning	Not applicable

## SECTION 3: Composition/information on

### 3.1. Substance

Name : 1,1-Difluoroethane, liquefied, under pressure  
CAS No : 75-37-6  
EC no : 200-866-1

Name	Product identifier	%	Classification (GHS-US)
1,1-Difluoroethane, liquefied, under pressure (Main constituent)	(CAS No)75-37-6	> 99	Liquefied gas, H280

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. In case of frostbites: Wash immediately with lots of water (15 minutes)/shower. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.
First-aid measures after eye contact	: Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Not applicable.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Contains refrigerated gas; may cause cryogenic burns or injury. Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Dizziness. Slight irritation. Headache. Nausea. Vomiting. Coordination disorders. Disturbances of consciousness. Disturbances of heart rate.
Symptoms/injuries after skin contact	: Frostbites.
Symptoms/injuries after eye contact	: No data available.
Symptoms/injuries after ingestion	: Not applicable.
Chronic symptoms	: No effects known.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray. BC powder. Carbon dioxide.
Unsuitable extinguishing media	: No unsuitable extinguishing media known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD. Flammable aerosol. Gas/vapor flammable with air within explosion limits. INDIRECT FIRE HAZARD. May build up electrostatic charges: risk of ignition. May be ignited by sparks. Gas/vapor spreads at floor level: ignition hazard.
Explosion hazard	: DIRECT EXPLOSION HAZARD. Gas/vapor explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. Heat may cause pressure rise in tanks/drums: explosion risk. may be ignited by sparks.
Reactivity	: On heating/burning: release of toxic and corrosive gases/vapor e.g.: hydrofluoric acid, carbonylfluoride. Reacts violently with (strong) oxidizers.

### 5.3. Advice for firefighters

Firefighting instructions	: If no hazard for/from the surroundings: controlled burning. If hazardous substances are nearby: consider extinguishment. Extinguish only if gas supply/leak can be shut afterwards. Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Dilute toxic gases with water spray.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.
Other information	: NFPA Aerosol Level 1.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. Eliminate every possible source of ignition. No naked lights. No smoking.

#### 6.1.1. For non-emergency personnel

Protective equipment : Insulating gloves. Protective goggles. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus. See "Material-Handling" to select protective clothing.

Emergency procedures : Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Avoid ingress of water in the containers. Wash contaminated clothes.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent spreading in sewers.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Tip the container on one side to stop the leakage. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapor with water curtain. Provide equipment/receptacles with earthing. Do not spray water on unheated tank walls. Do not use compressed air for pumping over spills.

Methods for cleaning up : Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. See "Material-handling" for suitable container materials. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling : Comply with the legal requirements. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe normal hygiene standards. Measure the concentration in the air regularly. Measure the oxygen concentration in the air. Work under local exhaust/ventilation.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Level 1 Aerosol.  
Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use. Keep in fireproof place. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

Storage temperature : < 50 °C

Heat of Combustion : -7,950 Btu/lb = -4,420 cal/g = -185X10+5 J/kg

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents.

Storage area : Ventilation at floor level. Fireproof storeroom. Provide for a tub to collect spills. Provide the tank with earthing. Keep out of direct sunlight. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: with pressure relief valve. clean. correctly labelled. meet the legal requirements.

Packaging materials : SUITABLE MATERIAL: steel. stainless steel. monel steel. lead. aluminium. copper. tin.

### 7.3. Specific end use(s)

Follow Label Directions.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls

Appropriate engineering controls : Local exhaust ventilation, vent hoods.  
Personal protective equipment : Avoid all unnecessary exposure. Gloves. Safety glasses.



Materials for protective clothing : GIVE GOOD RESISTANCE: butyl rubber. leather. neoprene. polyethylene. PVC.  
Hand protection : Insulated gloves.  
Eye protection : Safety glasses.  
Skin and body protection : Protective clothing.  
Respiratory protection : High vapor/gas concentration: self-contained respirator. Maintain oxygen levels above 19.5% in the workplace. Use supplied air respiratory protection if oxygen levels are below 19.5% or during emergency response to a release of this product. Wear appropriate mask.  
Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Gas  
Appearance :  
Liquefied gas.  
Molecular mass : 66.05 g/mol  
Color : Colorless.  
Odor :  
Mild odor. Slight Ether-like odor  
Odor threshold :  
No data available  
pH :  
No data available  
Relative evaporation rate (butyl acetate=1) :  
No data available  
Melting point :  
-117 °C  
Freezing point :  
No data available  
Boiling point :  
-25 °C  
Flash point :  
< -50 °C  
Critical temperature :  
114 °C  
Auto-ignition temperature : 455 °C  
Decomposition temperature :  
No data available  
Flammability (solid, gas) :  
No data available  
Vapor pressure :  
5100 hPa  
Vapor pressure at 50 °C :

	11700 hPa
Critical pressure	: 44960 hPa
Relative vapor density at 20 °C	: 2.3
Relative density	:
	1.0 (-25 °C)
Specific gravity / density	:
	1004 kg/m <sup>3</sup> (-25 °C)
Solubility	: Poorly soluble in water. Soluble in organic solvents. Water: 0.54 g/100ml (0 °C)
Log Pow	:
	0.75 (Experimental value)
Log Kow	:
	No data available
Viscosity, kinematic	:
	No data available
Viscosity, dynamic	:
	0.37 Pa.s (-31 °C)
Explosive properties	:
	No data available
Oxidizing properties	:
	No data available
Explosive limits	:
	4 - 19 vol % 112 - 518 g/m <sup>3</sup>

## 9.2. Other information

VOC content	: 0 %
Gas group	: Liquefied gas
Other properties	: Gas/vapor heavier than air at 20°C. May generate electrostatic charges.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On heating/burning: release of toxic and corrosive gases/vapor e.g.: hydrofluoric acid, carbonyl fluoride. Reacts violently with (strong) oxidizers.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### R152A ( f )75-37-6

LC50 inhalation rat (mg/l)	176 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	> 437500 ppm/4h Mortality in 2/6 at 43.75% and 1/6 at 38.3%. At ≥ 17.52% lethargy, laboured breathing, reduced responsiveness to sound were observed. At 6.64% only hyperaemia and shallow breathing were observed.

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified. Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified. Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified. Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified. Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Dizziness. Slight irritation. Headache. Nausea. Vomiting. Coordination disorders. Disturbances of consciousness. Disturbances of heart rate.
Symptoms/injuries after skin contact	: Frostbites.
Symptoms/injuries after eye contact	: No data available.
Symptoms/injuries after ingestion	: Not applicable.
Chronic symptoms	: No effects known.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - air	:Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-LuftKlasse 5.2.5.
Ecology - water	:Mild water pollutant (surface water). No data available on ecotoxicity.

### 12.2. Persistence and degradability

#### R152A (75-37-6)

Persistence and degradability	Biodegradability in water: no data available.
-------------------------------	---

### 12.3. Bioaccumulative potential

#### R152A (75-37-6)

Log Pow	0.75 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information	: Avoid release to the environment.
-------------------	-------------------------------------

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Refer to manufacturer/supplier for information on recovery/recycling.
Additional information	: LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground):	UN1030, 1,1-Difluoroethane, 2.1, Level 1 Aerosol
ICAO/IATA (air):	UN1950, Aerosols, Flammable, 2.1, Limited Quantity
IMO/IMDG (water):	UN1950, Aerosols, Flammable, 2.1, Limited Quantity
Special Provisions:	DOT-SP 11516: In accordance with this special permit, this product is not subject to labeling requirements unless offered for transportation by air. This product is not subject to placarding requirements. Outside packaging must be marked with proper shipping description and 'DOT-SP 11516'

### 14.2. UN proper shipping name

DOT Proper Shipping Name	: 1,1-Difluoroethane
DOT Special Provisions (49 CFR 172.102)	: DOT-SP 11516: In accordance with this special permit, this product is not subject to labeling requirements unless offered for transportation by air. This product is not subject to placarding requirements. Outside packaging must be marked with proper shipping description and 'DOT-SP 11516'
DOT Packaging Exceptions (49 CFR 173.xxx)	: 306
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 304
DOT Packaging Bulk (49 CFR 173.xxx)	: 314;315

### 14.3. Additional information

Other information	: No supplementary information available.
Special transport precautions	: DOT-SP 11516: In accordance with this special permit, this product is not subject to labeling requirements unless offered for transportation by air. This product is not subject to placarding requirements. Outside packaging must be marked with proper shipping description and 'DOT-SP 11516'.

### Overland transport

Class (ADR)	: 2 - Gases
Hazard identification number (Kemler No.)	: 23
Classification code (ADR)	: 2F

**Additional Information:** TDG Canada: AVW, Inc has been granted Equivalency Certificate SU 9211 (ren. 1) by the TCSS, TDGD to offer for transport by road, rail and marine.

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 150 kg

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### R152A (75-37-6)

SARA Section 311/312 Hazard Classes	Fire hazard Sudden release of pressure hazard Immediate (acute) health hazard
-------------------------------------	---

### 15.2. International regulations

#### CANADA

#### R152A (75-37-6)

WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Aerosol
----------------------	--



## NEW ZEALAND

HSNO regulation Hazard Class: 2.1.2A  
UN1030, 1,1-Difluoroethane, R152A Flammable, Gases that are not otherwise hazardous

## EU-Regulations

No additional information available

## Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Gas 1 H220 Press.  
Gas

Full text of H-phrases: see section 16

## Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD] F+;

R12

Full text of R-phrases: see section 16

## 15.2.2. National regulations

No additional information available

## 15.3. US State regulations

### R152A (75-37-6)

State or local regulations	U.S. - New Jersey - Right to Know Hazardous Substance List
	U.S. - Pennsylvania - RTK (Right to Know) List
	U.S. - Massachusetts - Right To Know List

## SECTION 16: 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 THE SAFETY OF THE GOODS, 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.*