



## **SAFETY DATA SHEET**

*EFFECTIVE DATE:* 1/11/2016

**ITEM:** Inland Alert/Locate Kit

**PART #**  
543

**UPC**  
77403105434

### **CONTENTS:**

Marine Hand Held Red Flare (HHRF) SDS  
Hand Held Orange Smoke Signal (HHOS) SDS  
Signal Horn (SDS)

### **SHIPPING INFORMATION**

Signal Devices, Hand 1.4S, UN0373, PG II (ERG 114)  
EX198604106  
EX 199708126

## SAFETY DATA SHEET

### 1. Product and Company Identification

#### Marine Hand Held Red Flare (HHRF)

**Identified Use:** Emergency signal      **Use Advised Against:** Do not use indoors or inside of a vehicle

**Manufacturers Information**    Orion Safety Products  
3157 North 500 West  
Peru, IN 46970  
US 1-800-851-5260  
Intl (11) 1-765-472-4375

**EMERGENCY**

**CHEMTREC**  
1-800-424-9300

### 2. Hazards Identification

#### GHS Classifications

Explosive	Category 1.4	H204
Skin Irritation	Category 2	H315
Eye Irritation	Category 2A	H319
STOT - Repeated Exposure	Category 3	H335

**Perchlorate Material – special handling may apply.**  
See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).

#### GHS Label Elements

Pictograms



Hazard Statements

H204	Fire or projection hazard
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Signal Word      **Warning**

#### Precautionary Statements

P103	Keep out of reach of children
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P232	Protect from moisture
P261	Avoid breathing dust/fume
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective eye protection
P370	In case of fire: use water deluge

P301/315	IF SWALLOWED: Get immediate medical advice /attention.
P302/352	IF ON SKIN: Wash with plenty of soap and water.
P304/340/342	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305/338/351	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333/313	If skin irritation or rash occurs, get medical advice/attention.
P501	Dispose of contents / container in accordance with local and national regulations

**Hazards Not Otherwise Classified (HNOC):** produces hot flame

### 3. Composition / Information on Ingredients

Component	CAS #	EINCS #	%age
Strontium Nitrate	10042-76-9	233-131-9	>50%
Sulfur	7704-34-9	231-722-6	<25%
Potassium Perchlorate	7778-74-7	231-912-9	<20%
Polyethylene	9002-88-4	none	<5%
Potassium Chlorate	3811-04-9	231-100-4	<5%

Note: Due to Confidential Business Information, "Trade Secrets", the exact percentage of each ingredient has not been disclosed. CBI information will be shared with appropriate authorities if circumstances warrant.

### 4. First Aid Measures

#### Description of first aid measures

<b>Inhalation</b>	If contents are inhaled, remove to fresh air. Watch for signs of allergic reaction. If other symptoms develop, get medical aid immediately.
<b>Skin</b>	If contents are contacted, wash with area with soap and water for 15 minutes. Remove contaminated clothing and wash before reuse. Get medical aid if irritation occurs.
<b>Eyes</b>	If contents get into eye, flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if easily possible. Get medical aid immediately.
<b>Ingestion</b>	Get medical aid immediately.

**Most important symptoms and effects both acute and delayed**      See section 2 labeling and section 11

**Indication of any immediate medical attention and special treatment needed**      No data available

## 5. Firefighting Measures

<b>Extinguishing Media</b>	Water deluge	<b>Unsuitable Extinguishing Media</b>	Foam and dry chemical extinguishers and suffocation are ineffective.
<b>Protective Equipment and Precautions for Firefighters</b>	Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Prevent further propagation of fire by spraying unburnt nearby product with water. Combat fire from a sheltered position.		
<b>Specific Hazards Arising from the Chemical</b>	Flame and sparks are ejected out the open end of the flare when it functions. Do not point flare at any part of the body or flammable material.		
<b>Further information</b>	No data available		

## 6. Accidental Release Measures

### Personal Precautions / Protective Equipment / Emergency Procedures

Do not breathe smoke or contents and avoid contact with skin and eyes. Wear flame retardant clothing with long sleeves, dust mask, rubber or nitrile gloves, safety goggles, safety shoes when cleaning up contents. Avoid friction on the released product. Keep away from ignition sources.

### Environmental Precautions

Prevent dispersion of contents on soil and in water. Prevent contents from spreading or entering into drains, ditches, groundwater or rivers by using appropriate barriers.

### Methods for Containment and Clean-up

Use caution when cleaning up spilled contents. Remove heat, flames, sparks and other sources of ignition. Use non-sparking tools and equipment. Prevent buildup of electrostatic charges by grounding. Clean spills in a manner that does not disperse dust into the air. When cleaning up contents, use local and/or general exhaust. Clean up avoiding dust generation and place in a well identified container. Do not absorb in sawdust or other combustible absorbents. Wash away remainder with plenty of water. Collect wash water for approved disposal.

## 7. Handling and Storage

<b>Precautions for Safe Handling</b>	Hold and point signal away from body when igniting. Hold signal downwind when burning. Avoid breathing smoke. Avoid contact with clothing and other combustible materials. Use outdoors only! Do not ignite or burn product inside a vehicle, boat cabin or building. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with skin and eyes. Avoid contact with heat sparks, and flame. Signals should be allowed to burn to completion. Unburned and partially burned signals contain potassium perchlorate which should not be allowed to come into contact with surface and ground water. Perchlorate Material – special handling may apply. See <a href="http://www.dtsc.ca.gov/hazardouswaste/perchlorate">www.dtsc.ca.gov/hazardouswaste/perchlorate</a> .
<b>Conditions for Safe Storage, Including Any Incompatibilities</b>	Store in a dry place away from direct sunlight, heat and incompatible materials. Store away from food and beverages. Store away from flammable materials, sources of heat, flame and sparks. Store at ambient temperature. Do not store partially burned signals in a vehicle, boat, closed container, warehouse, or any other building..

## 8. Exposure Controls / Personal Protection

### Control parameters

Exposure Limits	OSHA PEL	ACGIH TLV
Strontium Nitrate	Not established	Not established
Sulfur	Not established	Not established
Potassium Perchlorate	Nuisance dust 15 mg/m <sup>3</sup>	Nuisance dust 15 mg/m <sup>3</sup>
Polyethylene	15 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA
Potassium Chlorate	Not established	Not established

### Exposure controls

**Engineering Controls** Use product outdoors only! When cleaning up contents, use local and/or general exhaust.

### Personal Protective Equipment

<b>Eye / Face Protection</b>	Safety glasses or goggles
<b>Skin Protection</b>	None under normal conditions when using product unless prolonged handling is anticipated. Impervious protective clothing, including gloves, boots, and a lab coat, apron or coveralls, as appropriate, when cleaning up spilled product. Wash hands and face before eating, drinking or using tobacco products
<b>Respiratory Protection</b>	None under normal conditions when using product. A particulate respirator (NIOSH t N95 or better filters) may be worn during the cleanup of spilled contents.
<b>General Hygiene</b>	Use product outdoors away from combustible products. For cleanup of spilled contents, emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of hazardous materials. Maintain good housekeeping and safety practices.

## 9. Physical and Chemical Properties

<b>Appearance (color, physical form, shape):</b>	Grey powder		
<b>pH:</b>	No data available	<b>Melting Point:</b>	No data available
<b>Boiling Point / Range:</b>	Not applicable	<b>Freezing Point:</b>	Not applicable
<b>Vapor Pressure:</b>	Not applicable	<b>Specific Gravity</b>	Not applicable
<b>Odor:</b>	No data available	<b>Odor Threshold:</b>	No data available
<b>Flammability:</b>	No data available	<b>Flammability Limits:</b>	No data available
<b>Partition Coefficient:</b>	No data available	<b>Viscosity:</b>	No data available
<b>Auto Ignition Temperature:</b>	No data available	<b>Decomposition Temperature:</b>	No data available
		<b>Solubility:</b>	No data available
		<b>Evaporation Rate:</b>	Not applicable
		<b>Vapor Density:</b>	Not applicable
		<b>Flash Point:</b>	Not available
		<b>Relative Density:</b>	No data available

## 10. Stability and Reactivity

<b>Chemical Stability</b> Stable	<b>Reactivity:</b> No information available	<b>Possibility of Hazardous Reactions</b> Hazardous polymerization will not occur
<b>Conditions to Avoid</b> Combustible materials, heat, flames, sparks and other sources of ignition. Moisture.	<b>Incompatible Materials</b> Strong acids, strong fuels, ammonia salts, and strong bases.	<b>Hazardous Decomposition Products</b> Carbon monoxide, carbon dioxide, sulfur oxides, and nitrogen oxides.

## 11. Toxicology Information

<b>Ingredient acute toxicity information</b>			
<b>Toxicology</b>	<b>Oral LD50</b>	<b>skin LD50</b>	<b>LC50</b>
Strontium Nitrate	Rat: 1892 mg/kg	not stated	not stated
Sulfur	Rat: 5050 mg/kg	Rat:>2020 mg/kg	Rat:>5.49 mg/L air concentration
Potassium Perchlorate	Rat: 2100 mg/kg	not stated	not stated
Polyethylene	Rat: 4000 mg/kg	not stated	not stated
Potassium Chlorate	Rat: 1870 mg/kg	2000 mg/kg ( Rabbit )	No information found
<b>Product toxicological information</b>			
<b>Acute Toxicity</b>	Not classified – <i>Acute Toxicity Estimate yields oral LD<sub>50</sub> over 5000 mg/kg bw</i>		
<b>Skin Irritation / Corrosion</b>	Category 2 – <i>over 10% of ingredients classified as a Category 2 skin irritant</i>		
<b>Serious Eye Damage / Irritation</b>	Category 2A – <i>over 10% of ingredients classified as a Category 2A eye irritant</i>		
<b>Respiratory / Skin Sensitization</b>	Not classified (Based on available data, the classification criteria are not met)		
<b>Germ Cell Mutagen</b>	Not classified (Based on available data, the classification criteria are not met)		
<b>Carcinogen</b>	Not classified (Based on available data, the classification criteria are not met)		
<b>Reproductive Toxicity</b>	Not classified (Based on available data, the classification criteria are not met)		
<b>STOT – single exposure</b>	Not classified (Based on available data, the classification criteria are not met)		
<b>STOT – repeated exposure</b>	Category 3 – respiratory <i>over 10% of ingredients classified as a Category 3 respiratory STOT hazard</i>		
<b>Aspiration Hazard</b>	Not classified (Based on available data, the classification criteria are not met)		
<b>Likely routes of exposure</b>	Skin, ingestion, inhalation		
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Contents irritating to eyes due to chemical and physical properties of the mixture. Ingestion of contents may cause gastrointestinal irritation with nausea, vomiting and diarrhea. Individuals with known allergies to sulfide drugs may also have allergic reactions to elemental sulfur.		
<b>Delayed and immediate effects and chronic effects from short and long term exposure</b>	Inhalation of contents or smoke from burning flare will cause irritation to the lungs and mucus membrane. Prolonged or repeated skin contact with contents may cause dermatitis.		
<b>Interactive effects</b>	No information found		

## 12. Ecological Information

<b>Ingredient toxicity / persistence / degradability / bioaccumulation / mobility in soil and water</b>	
<b>Aquatic Toxicity</b>	<u>Potassium Chlorate:</u> fish: LC50 oncorhynchus mykiss (rainbow trout) 1750 mg/l – 96 hr, EC50 daphnia magna (water flea) 1093 mg/l 24 hr <u>Strontium Nitrate:</u> Acute toxicity - Fishes, Carassius auratus, LC100, 9,615 mg/l; Chronic toxicity - Fishes, Gasterosteus aculeatus, LC100, 2.912 mg/l <u>Sulfur:</u> Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - > 180 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) – > 5,000 mg/l - 48 h
<b>Persistence / Degradability</b>	No information found
<b>Bioaccumulation / Accumulation</b>	No information found
<b>Mobility in Environmental Media</b>	<u>Strontium Nitrate:</u> Water considerable solubility and mobility; Soil/sediments non-significant adsorption.
<b>Other adverse effects</b>	No information found

## 13. Disposal Considerations (for spills and leakage)

Dispose of contaminated product and materials used in cleaning up spills or leaks in the manner approved for pyrotechnic material. Consult appropriate federal, state, and local regulatory agencies to ascertain proper disposal procedures. Open burning is preferred method of disposal for pyrotechnic materials. Refer to California Code of Regulations, Title 33, Sections 67384.1-67384.10 for additional information on handling and disposal of potassium perchlorate containing materials.

## 14. Transportation Information

	<b>ID Number</b>	<b>shipping name</b>	<b>hazard class</b>	<b>packing group</b>	<b>EX Number</b>	<b>Reportable Quantities</b>
<b>Domestic &amp; International</b>	UN0373	Signal Devices, Hand	1.4S	II	EX-8604106	none
<b>Marine Pollutant:</b> no	<b>Special precautions for user:</b> No information available					

## 15. Regulatory Information

US Regulations	TSCA	CERCLA	CWA	CAA	SARA 313	SARA 302	Acute	Chronic	Fire	Reactivity	Pressure
Strontium Nitrate	yes	no	no	no	yes	no	yes	no	no	yes	no
Sulfur	yes	no	no	no	no	no	yes	no	yes	no	no
Potassium Perchlorate	yes	no	no	no	no	no	yes	no	no	yes	no
Polyethylene	yes	no	no	no	no	no	no	no	no	no	no
Potassium Chlorate	yes	no	no	no	no	no	yes	no	no	yes	no



US States	Prop 65	NJ	PA	Canada	WHMIS	DSL	Europe	wgk
Strontium Nitrate	no	1743	no		C Oxidizing materials D1B Toxic materials	yes		2
Sulfur	no	1757	yes		D2B Toxic materials B4 Flammable solid	yes		1 / nwg
Potassium Perchlorate	no	1577	yes		D2B Toxic materials C Oxidizing materials	yes		1
Polyethylene	no	no	no		D1B Toxic materials Not controlled	yes		not listed
Potassium Chlorate	no	1560	yes		C Oxidizing materials D1B Toxic materials	yes		2

## 16. Other Information

Revision Information: May 2015

NFPA Rating		HMIS Rating	
Flammability	2	Flammability	1
Health	2	Health	3
Reactivity	1	Physical Hazard	1

### Key / Legend:

HMIS: hazardous material identification system  
 NFPA: national fire protection association  
 CAS: Chemical Abstracts Service number  
 EINECS: European inventory of existing chemical substances  
 OSHA PEL: occupational safety and health administration permissible exposure limit  
 NIOSH TLV: national institute of occupational safety and health Threshold Limit Value  
 NTP: National Toxicology Program  
 IARC: International Agency for Research on Cancer

TSCA: toxic substance control act - US  
 CERCLA: comprehensive environmental response, compensation and liability act - US  
 CWA: clean water act - US  
 CAA: clean air act - US  
 SARA: superfund amendments and reauthorization act - US  
 PROP 65: California's Proposition 65 list  
 WHMIS: workplace hazardous materials information system - Canada  
 DSL: Domestic Substances List - Canada  
 WGK: water hazard classes - Germany

### Legal Statement

*This information is accurate to the best knowledge Orion Safety Products. Orion Safety Products makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability or fitness for a particular purpose, with respect to the information set forth herein or the product to which the information refers. Accordingly, Orion Safety Products will not be responsible for damages resulting from use of or reliance upon this information. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.*

## SAFETY DATA SHEET

### 1. Product and Company Identification

#### Marine Hand Held Orange Smoke Signal (HHOS)

Synonyms: SAR Orange Smoke Signal

Identified Use: Emergency signal

Use Advised Against: Do not use indoors or inside of a vehicle

Manufacturers Information  
Orion Safety Products  
3157 North 500 West  
Peru, IN 46970  
US 1-800-851-5260  
Intl (11) 1-765-472-4375

**EMERGENCY**

**CHEMTREC**  
1-800-424-9300

### 2. Hazards Identification

#### GHS Classifications

Explosive	Category 1.4	H204
Skin Irritation	Category 2	H315
Eye Irritation	Category 2A	H319
Skin Sensitization	Category 1	H317
STOT - Repeated Exposure	Category 1	H372

**Perchlorate Material – special handling may apply,  
See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).**

#### GHS Label Elements

##### Pictograms



##### Hazard Statements

H204	Fire or projection hazard
H315	Causes skin irritation
H319	Causes serious eye irritation
H317	May cause an allergic skin reaction
H372	Causes damage to lungs through prolonged or repeated exposure

Signal Word **Danger**

##### Precautionary Statements

P103	Keep out of reach of children
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P232	Protect from moisture
P261	Avoid breathing dust/fume
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective eye protection
P370	In case of fire: use water deluge

P301/315	IF SWALLOWED: Get immediate medical advice /attention.
P302/352	IF ON SKIN: Wash with plenty of soap and water.
P304/340/342	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305/338/351	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333/313	If skin irritation or rash occurs, get medical advice/attention.
P501	Dispose of contents / container in accordance with local and national regulations

**Hazards Not Otherwise Classified (HNOC):** produces hot flame and copious amount of smoke

### 3. Composition / Information on Ingredients

Component	CAS #	EINCS #	%age
Solvent Yellow Dye	842-07-9	212-668-2	<40%
Lactose	63-42-3	none	<40%
Potassium Chlorate	3811-04-9	231-100-4	<25%
Solvent Orange 7 Dye	3118-97-6	221-490-4	<20%
Potassium Perchlorate	7778-74-7	231-912-9	<0.5%

Note: Due to Confidential Business Information, "Trade Secrets", the exact percentage of each ingredient has not been disclosed. CBI information will be shared with appropriate authorities if circumstances warrant.

### 4. First Aid Measures

#### Description of first aid measures

<b>Inhalation</b>	If contents are inhaled, remove to fresh air. Watch for signs of allergic reaction. If other symptoms develop, get medical aid immediately.
<b>Skin</b>	If contents are contacted, wash with area with soap and water for 15 minutes. Remove contaminated clothing and wash before reuse. Get medical aid if irritation occurs.
<b>Eyes</b>	If contents get into eye, flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if easily possible. Get medical aid immediately.
<b>Ingestion</b>	Get medical aid immediately.

Most important symptoms and effects both acute and delayed

See section 2 labeling and section 11



Indication of any immediate medical attention and special treatment needed No data available

### 5. Firefighting Measures

<b>Extinguishing Media</b>	Water deluge	<b>Unsuitable Extinguishing Media</b>	Foam and dry chemical extinguishers and suffocation are ineffective.
<b>Protective Equipment and Precautions for Firefighters</b>	Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Prevent further propagation of fire by spraying unburnt nearby product with water. Combat fire from a sheltered position.		
<b>Specific Hazards Arising from the Chemical</b>	Only use outdoors. Contents / dust may form explosive mixtures. Flame and copious amounts of smoke are ejected out the open end of the signal when it functions. Do not point signal at any part of the body or flammable material.		
<b>Further information</b>	No data available		

### 6. Accidental Release Measures

#### Personal Precautions / Protective Equipment / Emergency Procedures

Do not breathe smoke or contents and avoid contact with skin and eyes. Wear flame retardant clothing with long sleeves, dust mask, rubber or nitrile gloves, safety goggles, safety shoes when cleaning up contents. Avoid friction on the released product. Keep away from ignition sources. Contains strong dyes which will color all exposed areas..

#### Environmental Precautions

Prevent dispersion of contents on soil and in water. Prevent contents from spreading or entering into drains, ditches, groundwater or rivers by using appropriate barriers.

#### Methods for Containment and Clean-up

Use caution when cleaning up spilled contents. Remove heat, flames, sparks and other sources of ignition. Use non-sparking tools and equipment. Prevent buildup of electrostatic charges by grounding. Clean spills in a manner that does not disperse dust into the air. When cleaning up contents, use local and/or general exhaust. Clean up avoiding dust generation and place in a well identified container. Do not absorb in sawdust or other combustible absorbents. Mop up exposed area with bleach to destroy color. Wash away remainder with plenty of water. Collect wash water for approved disposal.

### 7. Handling and Storage

<b>Precautions for Safe Handling</b>	Hold and point signal away from body when igniting. Hold signal downwind when burning. Avoid breathing smoke. Avoid contact with clothing and other combustible materials. Use outdoors only! Do not ignite or burn product inside a vehicle, boat cabin or building. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with skin and eyes. Avoid contact with heat sparks, and flame. Contains strong dyes which will color all exposed areas. Signals should be allowed to burn to completion. Unburned and partially burned signals should not be allowed to come into contact with surface and ground water. Refer to California Code of Regulations, Title 33, Sections 67384.1-67384.10 for additional information on handling and disposal of potassium perchlorate containing materials
<b>Conditions for Safe Storage, Including Any Incompatibilities</b>	Store in a dry place away from direct sunlight, heat and incompatible materials. Store away from food and beverages. Store away from flammable materials, sources of heat, flame and sparks. Store at ambient temperature. Do not store partially burned signals in a vehicle, boat, closed container, warehouse, or any other building..

### 8. Exposure Controls / Personal Protection

#### Control parameters

Exposure Limits	OSHA PEL	ACGIH TLV
Solvent Yellow Dye	No information found	None
Lactose	Nuisance particulate, 15 mg/m <sup>3</sup> of total dust	Nuisance particulate 10 mg/m <sup>3</sup> of total dust
Potassium Chlorate	No Airborne Exposure Limits established	No Airborne Exposure Limits established
Solvent Orange 7 Dye	No information found	No information found
Shellac	1000 ppm	1000 ppm
Potassium Perchlorate	Nuisance dust 15 mg/m <sup>3</sup> .	Nuisance dust 15 mg/m <sup>3</sup> .

#### Exposure controls

<b>Engineering Controls</b>	Use product outdoors only! When cleaning up contents, use local and/or general exhaust.
<b>Personal Protective Equipment</b>	
<b>Eye / Face Protection</b>	Safety glasses or goggles
<b>Skin Protection</b>	None under normal conditions when using product unless prolonged handling is anticipated. Contains strong dyes which will color all exposed areas. When cleaning up spilled contents, wear full length impervious protective clothing, including gloves, boots, and a lab coat, apron or coveralls, as appropriate. Wash hands and face before eating, drinking or using tobacco products
<b>Respiratory Protection</b>	None under normal conditions when using product. A particulate respirator (NIOSH t N95 or better filters) may be worn during the cleanup of spilled contents.
<b>General Hygiene</b>	Use product outdoors away from combustible products. For cleanup of spilled contents, emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of hazardous materials. Maintain good housekeeping and safety practices. Do not let contents accumulate in storage or work areas. Clean spills up promptly.

## 9. Physical and Chemical Properties

Appearance (color, physical form, shape): Orange powder		Melting Point: No data available		Solubility: No data available	
pH: No data available		Freezing Point: Not applicable		Evaporation Rate: Not applicable	
Boiling Point / Range: Not applicable		Specific Gravity: Not applicable		Vapor Density: Not applicable	
Vapor Pressure: Not applicable		Odor Threshold: No data available		Flash Point: Not available	
Odor: No data available		Flammability Limits: No data available		Relative Density: No data available	
Flammability: No data available		Viscosity: No data available		Decomposition Temperature: No data available	
Partition Coefficient: No data available					
Auto Ignition Temperature: >167°F					

## 10. Stability and Reactivity

Chemical Stability: Stable	Reactivity: No information available	Possibility of Hazardous Reactions: Hazardous polymerization will not occur
Conditions to Avoid: Excessive temperatures, moisture, water, acids, and ignition sources	Incompatible Materials: Strong oxidizers, strong acids, oxidizing or reducing agents. Liquid acids of any kind. Hydrogen Fluoride, Ammonia Salts.	Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, nitrogen oxides,

## 11. Toxicology Information

### Ingredient acute toxicity information

Toxicology	Oral LD50	skin LD50	LC50
Solvent Yellow Dye	Rat: 5000 mg/kg	No information found	No information found
Lactose	Rat: 10000 mg/kg	No information found	No information found
Potassium Chlorate	Rat: 1870 mg/kg	2000 mg/kg ( Rabbit )	No information found
Solvent Orange 7 Dye	Rat: 5000 mg/kg	No information found	No information found
Shellac	Rat: 5000 mg/kg	No information found	No information found
Potassium Perchlorate	Rat: 2100 mg/kg	No information found	No information found

### Product toxicological information

Acute Toxicity	Not classified – Acute Toxicity Estimate yields oral LD <sub>50</sub> over 5000 mg/kg bw
Skin Irritation / Corrosion	Category 2 – over 10% of ingredients classified as a Category 2 skin irritant
Serious Eye Damage / Irritation	Category 2A – over 10% of ingredients classified as a Category 2A eye irritant
Respiratory / Skin Sensitization	Category 1 Skin – over 0.1% of ingredients are classified as a Category 1 skin sensitizer
Germ Cell Mutagen	Not classified (Based on available data, the classification criteria are not met)
Carcinogen	Not classified (Based on available data, the classification criteria are not met)
Reproductive Toxicity	Not classified (Based on available data, the classification criteria are not met)
STOT – single exposure	Not classified (Based on available data, the classification criteria are not met)
STOT – repeated exposure	Category 1 – lungs over 1% of ingredients classified as a Category 1 STOT hazard
Aspiration Hazard	Not classified (Based on available data, the classification criteria are not met)
Likely routes of exposure	Skin, ingestion, inhalation
Symptoms related to the physical, chemical and toxicological characteristics	Irritation to the eyes will cause watering and redness. Reddening, scaling, and itching are characteristics of skin inflammation. Ingestion of contents may cause gastrointestinal irritation with nausea, vomiting and diarrhea. Inhalation will cause irritation to the lungs and mucus membrane.
Delayed and immediate effects and chronic effects from short and long term exposure	Both the solvent yellow and orange dyes may cause dermatitis in sensitive individuals.
Interactive effects	No information found

## 12. Ecological Information

### Ingredient toxicity / persistence / degradability / bioaccumulation / mobility in soil and water

Aquatic Toxicity	Potassium Chlorate: fish: LC50 oncorhynchus mykiss (rainbow trout) 1750 mg/l – 96 hr, EC50 daphnia magna (water flea) 1093 mg/l 24 hr
Persistence / Degradability	No information found
Bioaccumulation / Accumulation	No information found
Mobility in Environmental Media	No information found
Other adverse effects	No information found

## 13. Disposal Considerations (for spills and leakage)

Dispose of contaminated product and materials used in cleaning up spills or leaks in the manner approved for pyrotechnic material. Consult appropriate federal, state, and local regulatory agencies to ascertain proper disposal procedures. Open burning is preferred method of disposal for pyrotechnic materials. Refer to California Code of Regulations, Title 33, Sections 67384.1-67384.10 for additional information on handling and disposal of potassium perchlorate containing materials

## 14. Transportation Information

	ID Number	shipping name	hazard class	packing group	EX Number	Reportable Quantities
Domestic & International	UN0373	Signal Devices, Hand	1.4S	II	EX-9708126	none

Marine Pollutant: no

Special precautions for user: No information available

**15. Regulatory Information**

US Regulations	TSCA	CERCLA	CWA	CAA	SARA 313	SARA 302	Acute	Chronic	Fire	Reactivity	Pressure
Solvent Yellow Dye	yes	no	no	no	yes	no	yes	yes	no	no	no
Lactose	yes	no	no	no	no	no	no	no	no	no	no
Potassium Chlorate	yes	no	no	no	no	no	yes	no	no	yes	no
Solvent Orange 7 Dye	yes	no	no	no	yes	no	no	yes	no	no	no
Shellac	yes	no	no	no	no	no	no	no	no	no	no
Potassium Perchlorate	yes	no	no	no	no	no	yes	no	no	yes	no

  

US States	Prop 65	NJ	PA	Canada	WHMIS	DSL	Europe	wgk
Solvent Yellow Dye	yes	0509	yes		D2A Very toxic materials D2B Toxic materials	yes		not listed
Lactose	no	no	no		Non controlled	yes		not listed
Potassium Chlorate	no	1560	yes		C Oxidizing materials D1B Toxic materials	yes		2
Solvent Orange 7 Dye	no	0506	yes		D2B Toxic materials	yes		3
Shellac	no	0844	yes		B2 - D2B Toxic materials	yes		0
Potassium Perchlorate	no	1577	yes		C Oxidizing materials D1B Toxic materials	yes		1

**16. Other Information**

<b>Revision Information:</b> May 2015			
<b>NFPA Rating</b>		<b>HMIS Rating</b>	
Flammability	2	Flammability	1
Health	2	Health	3
Reactivity	1	Physical Hazard	1

  

<b>Key / Legend:</b>	TSCA: toxic substance control act - US
HMIS: hazardous material identification system	CERCLA: comprehensive environmental response, compensation and liability act - US
NFPA: national fire protection association	CWA: clean water act - US
CAS: Chemical Abstracts Service number	CAA: clean air act - US
EINECS: European inventory of existing chemical substances	SARA: superfund amendments and reauthorization act - US
OSHA PEL: occupational safety and health administration permissible exposure limit	PROP 65: California's Proposition 65 list
NIOSH TLV: national institute of occupational safety and health Threshold Limit Value	WHMIS: workplace hazardous materials information system - Canada
NTP: National Toxicology Program	DSL: Domestic Substances List - Canada
IARC: International Agency for Research on Cancer	WGK: water hazard classes - Germany

**Legal Statement**

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# Safety Data Sheet

## Falcon Safety Horns

### Section 1. Identification

Product Identifier	Falcon Safety Horns
Synonyms	Super Sonic: SSN, SSNR, SSCN, TAD4N; Mighty Sonic: MSN, MSNR; Sound 911: 911, 911PSH, 911PSHR, 9112R; Push Button: PBShN, PBShNR, PBShNCN, PBShNCSh, PBShNRCN; Push Button Jr.: PBNJC, PBNJR; Commander-4: FC4N, FNR; SuperSound: SH3, SH3R; Aqua Blast: PWH, PWHR
Manufacturer Stock Numbers	N/A
Product Cas	811-97-2
Recommended use	Personal Safety - Hand Held Signaling device. Prior to use, read all label instructions and warnings. Use only as directed.
Uses advised against	Keep out of reach of children. Intentional misuse by deliberately concentrating and/or inhaling contents may be fatal. This safety device creates a loud noise and should not be used unnecessarily or near ears.
Manufacturer Contact Address	Falcon Safety Products, Inc. 25 ImClone Drive Branchburg, NJ, 08876 USA
Phone	(908) 707-4900
Emergency Phone	(800) 498-7192
Fax	N/A

### Section 2. Hazards Identification

Classification	GASES UNDER PRESSURE - Compressed gas
Signal Word	Warning
Pictogram	
Hazard Statements	Contains gas under pressure; may explode if heated
Precautionary Statements	

Response	N/A
Prevention	N/A
Storage	Protect from sunlight. Store in a well-ventilated place.
Disposal	N/A
Ingredients of unknown toxicity	0%
Hazards not Otherwise Classified	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.
	No Data Available

### Section 3. Ingredients

CAS	Ingredient Name	Weight %
811-97-2	Ethane, 1,1,1,2-tetrafluoro-	100 %

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

### Section 4. First-Aid Measures

Eye	Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.
Skin	For liquid contact, warm areas gradually by flushing with lukewarm water. Do not rub affected area, If blistering occurs, apply a sterile dressing. Seek medical attention.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion	Is not considered a potential route of exposure.
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	This material is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	N/A
Fire fighting instructions	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Additional Information	Hazardous decomposition products may include: Hydrogen Flouride, Carbonyl flouride, Carbon Oxides.

## Section 6. Accidental Release Measures

Clean-up	Stop release if it can be done safely. Ventilate area using forced ventilation, especially close to floor or ground. Evaporation occurs rapidly and vapors are heavier than air and can collect in low lying areas. Wear a self-contained breathing apparatus and appropriate Personal protection. (See Exposure Controls/Personal Protection section.)
Containment	Water spray may be useful in minimizing or dispersing vapors.
Safeguards (Personnel)	Evacuate personnel to safe areas. Ventilate the area. Refer to protective measures listed in sections 7 and 8.

## Section 7. Handling and Storage

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.
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.

## Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Ethane, 1,1,1,2-tetrafluoro-	N/A	N/A	N/A
Personal Protective Equipment	N/A			
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.			
Eye-Face Protection	As required by employer code. If there is a risk of contact with the eyes or face, wear safety glasses with side shields.			
Engineering Controls	Use with adequate ventilation. Keep container tightly closed.			
Respirators	If respiratory protection is required (large release, clean-up) wear NIOSH approved protection as appropriate.			

## Section 9. Physical and Chemical Properties

Physical State	Gas
Color	Clear
Odor	Slight Ethereal
Odor Threshold	No data
Solubility	Slightly
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	No Data
Specific Gravity	1.24
Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	None per ASTM E681
FP Method	None per ASTM E681
Ph	N/A
Melting Point	N/A
Boiling Point	-15 degrees F/-26.5C
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	>1(Ethyl Ether=1.0)
Flammability	N/A
Decomposition Temperature	No Data
Auto-ignition Temperature	No Data
Vapor Pressure	70 PSIG @ 70 degrees F
Vapor Density	3.5

## Section 10. Stability and Reactivity

Stability	Stable under recommended storage conditions.
Conditions to Avoid	Aerosol containers are unstable at temperatures above 120 degrees F/49 degrees C.
Incompatible Materials	Alkali or Alkaline Earth Metals. Powdered Metal. Powdered Metal Salts.
Hazardous Decomposition Products	Carbon Oxides, Hydrogen Fluoride, Carbonyl Fluoride, Fluorocarbons
Conditions to Avoid	To avoid thermal decomposition, do not overheat.

## Section 11. Toxicological Information

Component Analysis - LC50	Ethane, 1,1,1,2-tetrafluoro- Not Available
Component Analysis - Oral LD50	Ethane, 1,1,1,2-tetrafluoro- Not available
Effects of Acute Exposure - Eye	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.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic Effects	Non-hazardous by WHMIS/OSHA Criteria
Mutagenicity	Non-hazardous by WHMIS/OSHA Criteria.
Reproductive Effects	Non-hazardous by WHMIS/OSHA Criteria.

## Section 12. Ecological Information

Aquatic Toxicity	1,1,1,2-Tetrafluoroethane - 96h LC50: Oncorhynchus (rainbow trout) 450mg/l 72 h EC50: Algae > 118 mg/l 48 h EC50: Daphnia magna (water flea) 980 mg/l
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## Section 13. Disposal

Waste Disposal Method	Comply with applicable Federal, State/Provincial, and Local Regulations. Do not pierce or burn, even after use.
Contaminated Packaging	Not Available

## Section 14. Transport Information

UN Number	3159
UN Proper Shipping Name	1,1,1,2-Tetrafluoroethane
DOT Classification	2.2
Packing Group	N/A
Packaging Exceptions	ORM-D (applicable to containers up to 1L)
Transportation of Dangerous Goods (TDG - Canada)	Proper Shipping Name: 1,1,1,2-Tetrafluoroethane Hazard Class: 2.2 UN number: 3159 Packaging Exceptions: Limited Quantity (containers up to 125ml)
IATA/ICAO ( Air)	Proper Shipping Name: 1,1,1,2-Tetrafluoroethane Hazard Class: 2.2 UN number: 3159 Maximum net quantity packaging: 75 kg
IMO (Vessel)	Proper Shipping Name: 1,1,1,2-Tetrafluoroethane Hazard Class: 2.2 UN Number: 3159

## Section 15. Regulatory Information

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.
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.
WHMIS Status	Controlled
WHMIS Classification	Class A - Compressed Gas

## Section 16. Other Information

Revision Date	5/14/2015
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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