

# SAFETY DATA SHEET

## 1. Product and Company Identification

**Skyblazer II, XLT and XLT, Twin  
SAR Red Aerial Signal**

Orion Safety Products  
3157 North 500 West  
Peru, IN 46970

Use: Emergency signal

Phone Number: US 1-800-851-5260

Intl (11) 1-765-472-4375

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

## 2. Hazards Identification

### Emergency Overview



Danger

GHS Classifications	
Explosive	Division 1.4
Acute Toxicity	Category 5
Skin Corrosion / Irritation	Product- Category 1A Contents - Category 2
Serious Eye Damage / Irritation	Product-Category 1 Contents - Category 2B

#### Hazard Statements:

Fire or projection hazard  
Causes severe skin burns and eye damage (product when burning)  
Causes skin and eye irritation (contents)  
Harmful if inhaled or swallowed

#### NFPA Rating

Flammability 2

Health 2

Reactivity 1

#### Precautionary Statements:

Keep out of reach of children.  
Keep away from heat/sparks/open flames/hot surfaces. – no smoking.  
Keep/Store away from combustible materials.  
Keep dry.  
Keep cool. Do not expose long term to temperatures exceeding 167°F  
Avoid breathing dust/smoke  
Use only outdoors. Do not ignite inside a building, vehicle or boat cabin.  
Wear eye protection.  
Do not dismantle.  
In case of fire: use water deluge. Do not use dry powder or foam extinguishers!

#### HMIS Rating

Flammability 1

Health 3

Physical Hazard 1

## 3. Composition / Information on Ingredients

Component	CAS #	EINCS #	%age
Strontium Nitrate	10042-76-9	233-131-9	<50%
Magnesium	7439-95-4	231-104-6	<50%
Strontium Peroxide	1314-18-7	215-224-6	<50%
Polyvinyl chloride	9002-86-2	none	<20%
Black Powder	mixture	mixture	<20%
Dextrin	9004-53-9	232-675-4	<20%
Primer	n/a	n/a	n/a

## 4. First Aid Measures

<b>Inhalation</b>	If smoke or contents are inhaled, remove to fresh air. If not breathing, give artificial respiration and get medical aid.
<b>Skin</b>	For burns, cool with water and bandage appropriately. 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 burned or irritation occurs.
<b>Eyes</b>	If burned, cover eye and get medical help immediately. If smoke or contents get into eye, flush with plenty of water for at least 15 minutes, occasionally lifting the up and lower lids. Remove contact lenses if easily possible Get medical aid immediately.
<b>Ingestion</b>	Get medical aid immediately.

## 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. Use copious amounts of water to extinguish fire. Using small quantities of water on contents / broken product can cause auto / re-ignition as contents contain magnesium. Use of water on a magnesium fire will generate hydrogen gas that may cause an explosion. Irritating fumes. Flaming projectiles may be ejected during a fire. Trace amounts of lead vapor may be produced (from ignition primer) in a fire situation.		

Flashpoint Not Applicable      Flammability Limits Not Applicable      Ignition Temperature >180F

## 6. Accidental Release Measures

Personal Precautions	Environmental Precautions
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.	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 product 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. Do not absorb in sawdust or other combustible absorbents. Pick up spill for recovery or disposal and place in an approved container. Wash away remainder with plenty of water. Collect wash water for approved disposal. Be very careful - magnesium powder may spontaneously ignite in presence of moisture. Magnesium powder reacts with water, producing flammable hydrogen gas.

### 7. Handling and Storage

**Handling** Point product away from body, other people, animals or combustible products when firing. Wear appropriate eye protection when using. Follow instructions on package! Do not disassemble signal. Avoid contact with clothing and other combustible materials. Use outdoors only. Do not remove bottom cap unless you are outdoors and preparing to activate signal. Do not ignite or launch product inside a vehicle, boat cabin, or building. Avoid ingestion and inhalation of smoke and contents. Wash thoroughly after handling. Avoid contact with heat sparks, and flame.

**Storage** Store in a cool area out of direct sunlight. Do not allow long-term exposure to temperatures in excess of 180°F. Avoid long-term immersion in water, exposure to moisture, open flames or extremely high temperature. Store away from flammable materials, sources of heat, flame and sparks. Do not store partially burned signals in a vehicle, boat, closed container, warehouse, or any other building.

### 8. Exposure Controls / Personal Protection

Exposure Limits	OSHA PEL	ACGIH TLV
Strontium Nitrate	Not Established	Not Established
Magnesium	unknown	unknown
Strontium Peroxide	nuisance dust 15 mg/m <sup>3</sup> .	nuisance dust 15 mg/m <sup>3</sup> .
Polyvinyl chloride	5mg/ml for the respirable portion and 15mg/ml* for total dust.	5 and 10mg/ml, respectively
Black Powder	Not established	Not established
Dextrin	15 mg/m <sup>3</sup> total dust	10 mg/m <sup>3</sup>

**Engineering Controls** Use product outdoors only! When cleaning up contents, use local and/or general exhaust.  
**Eye / Face Protection** Turn face from product when firing. Wear safety glasses or goggles during use and when cleaning up spilled contents.  
**Skin Protection** 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.  
**Respiratory Protection** 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.  
**General Hygiene** 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 plastic tube.

<b>pH:</b> Not available	<b>Melting Point:</b> >500°F	<b>Solubility:</b> Slight
<b>Boiling Point:</b> Not applicable	<b>Freezing Point:</b> Not applicable	<b>Evaporation Rate:</b> Not applicable
<b>Vapor Pressure:</b> Not applicable	<b>Specific Gravity:</b> Not applicable	<b>Vapor Density:</b> Not applicable

### 10. Stability and Reactivity

**Chemical Stability** Stable      **Possibility of Hazardous Reactions** Hazardous polymerization will not occur.

<b>Conditions to Avoid</b> Excessive temperatures, moisture, water, acids,. Exposure of the signal to temperatures in excess of 180°F may cause weakening of the signal body. Avoid open flames, extremely high temperatures, wet conditions. and ignition sources	<b>Incompatible Materials</b> Strong oxidizers, strong acids, oxidizing or reducing agents. Liquid acids of any kind. Hydrogen Fluoride, Avoid exposure to organic solvents which might weaken the signal body.	<b>Hazardous Decomposition Products</b> Carbon monoxide, Nitrous oxides, Carbon dioxide. Magnesium hydroxides and oxides
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### 11. Toxicology Information

Toxicology	Oral LD50	skin LD50	LC50
Strontium Nitrate	Rat 2750 mg/kg	Not Established	Not Established
Magnesium	Not Established	Not Established	Not Established
Strontium Peroxide	Not Established	Not Established	Not Established
Polyvinyl chloride	Not Established	Not Established	Not Established
Black Powder	Not Established	Not Established	Not Established
Dextrin	Not Established	Not Established	Not Established



### Acute Dose Effects

Burning signal can cause severe burns if in contact with body - product burns at an extremely high temperature. Particles from firing may be harmful if inhaled. Contact with contents may cause moderate skin and eye irritation. Inhalation of smoke or contents will cause irritation to the lungs and mucus membrane. Exposure to smoke during use may aggravate asthma if inhaled.

<b>Irritation</b>	Irritating to the skin and eyes on contact. Inhalation will cause irritation to the lungs and mucus membrane.
<b>Carcinogenicity</b>	No information found
<b>Genetic Effects</b>	No information found
<b>Developmental Effects</b>	No information found
<b>Target Organ Effects</b>	Eye, skin, and lungs

### Repeated Dose Effects

No known chronic effects. Repeated or prolonged exposure to this compound is not known to aggravate medical conditions.

<b>Corrosivity</b>	May cause eye or skin burns if in contact with burning signal.
<b>Reproductive Effects</b>	No information found
<b>Neurological Effects</b>	No information found
<b>Sensitization</b>	No information found

## 12. Ecological Information

Aquatic Toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environmental Media
Strontium Nitrate: <i>Acute toxicity - Fishes, Carassius auratus, LC100, 9,615 mg/l; Chronic toxicity - Fishes, Gasterosteus aculeatus, LC100, 2,912 mg/l</i>	No information found	No information found	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.

## 14. Transportation Information

	shipping name	hazard class	ID Number	packing group	EX Number	Reportable Quantities
United States & International	Flares, aerial	1.4G	UN0403	n/a	XLT & SAR - EX2002110107 TWIN - EX2002110148	none

## 15. Regulatory Information

US Regulations	TSCA	CERCLA	CWA	CAA	SARA 313	SARA 302	Acute	Chronic	Fire	Reactivity	Pressure
Strontium Nitrate	yes	no	no	no	no	no	no	no	no	no	no
Magnesium	yes	no	no	no	no	no	no	no	no	no	no
Strontium Peroxide	yes	no	no	no	no	no	not stated	not stated	not stated	not stated	not stated
Polyvinyl chloride	yes	no	no	no	no	no	no	no	no	no	no
Black Powder	mixture	mixture	mixture	mixture	mixture	mixture	mixture	mixture	mixture	mixture	mixture
Dextrin	yes	no	no	no	no	no	no	no	no	no	no

US States	Prop 65	NJ	PA	Canada	WHMIS	DSL	Europe	wgk
Strontium Nitrate	no	1743	no		No results	yes		2
Magnesium	no	1136	yes		No results	yes		nwg
Strontium Peroxide	no	1745	no		No results	yes		not listed
Polyvinyl chloride	no	3622	no		No results	yes		not listed
Black Powder	mixture	mixture	mixture		mixture	mixture		mixture
Dextrin	no	no	no		No results	yes		1

## 16. Other Information

Revision Information: October 2016

### Risk and Safety Phrases:

- R10 Flammable
- R38 Irritating to skin (contents)
- R20 Harmful by inhalation.
- R21 Harmful in contact with skin.
- R22 Harmful if swallowed.
- R34 Causes burns
- R36 Irritating to eyes.
- R37 Irritating to respiratory system.
- S17 Keep away from combustible material
- S16 Keep away from sources of ignition
- S2 Keep out of the reach of children.

- S8 Keep container dry.
- S13 Keep away from food, drink and animal foodstuffs.
- S24 Avoid contact with skin.
- S25 Avoid contact with eyes.
- S29 Do not empty into drains.
- S41, In case of fire and / or explosion do not breathe fumes
- S43 In case of fire use water
- S51 Use only in well ventilated areas
- S39 Wear eye / face protection.

### 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:

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