

SAFETY DATA SHEET

1. Product and Company Identification

Pocket Rocket Red Aerial Flare

Identified Use: Emergency distress signal **Use Advised Against:** Do not use indoors or inside 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 1	H318
Carcinogenicity	Category 2	H351
STOT - Single Exposure	Category 3	H335

GHS Label Elements

Pictograms



Hazard Statements

H204	Fire or projection hazard
H315	Causes skin irritation
H318	Causes serious eye damage
H351	Suspected of causing cancer
H335	May cause respiratory irritation

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

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.
P370	In case of fire: use water deluge

Hazards Not Otherwise Classified (HNOC): none

3. Composition / Information on Ingredients

Component	CAS #	EINCS #	%age
Strontium Peroxide	1314-18-7	215-224-6	<30%
Polyprop Polymer	Mixture	Mixture	<20%
Magnesium	7439-95-4	231-104-6	<20%
Strontium Nitrate	10042-76-9	233-131-9	<15%
Aluminum	7429-90-5	231-072-3	<10%
Polyvinyl Chloride	9002-86-2	none	<10%
Black Powder	Mixture	none	<10%
Iron	1309-37-1	231-096-4	<5%
Copper	7440-50-8	231-159-6	<1%
Barium Nitrate	10022-31-8	233-020-5	<1%

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

Inhalation	If contents are inhaled, remove to fresh air. Watch for signs of allergic reaction. If other symptoms develop, get medical aid immediately.
Skin	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.
Eyes	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.
Ingestion	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

Extinguishing Media	Water deluge	Unsuitable Extinguishing Media	Foam and dry chemical extinguishers and suffocation are ineffective.
Protective Equipment and Precautions for Firefighters	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.		
Specific Hazards Arising from the Chemical	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.		
Further information	No data available		

6. Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures

Do not breathe 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. 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 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

Precautions for Safe Handling

Point product away from body, other people, animals or combustible products when firing. Wear appropriate eye protection during use. Follow instructions on package! Turn face from signal when firing. 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.

Conditions for Safe Storage, Including Any Incompatibilities

Store in a cool area out of direct sunlight. Avoid long-term immersion in water, exposure to moisture, open flames or extremely high temperature. Store away from flammable materials and incompatible materials. See section 10. 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 Peroxide	Nuisance dust 15 mg/m ³ .	Nuisance dust 15 mg/m ³ .
Polyprop Polymer	8-hour TWA of 15 mg/m ³ (total dust), 5 mg/m ³ (respirable fraction)	8-hour TWA of 10 mg/m ³ (inhalable particles), 3 mg/m ³ (respirable particles)
Magnesium	Not Established	Not Established
Strontium Nitrate	Not Established	Not Established
Aluminum	TWA: 15 mg/m ³	TWA: 1 mg/m ³
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
Iron	TWA 10 mg/m ³	Not Established
Copper	0.1 mg/m ³ (fume) 1 mg/m ³ (dusts and mists)	0.2 mg/m ³ (fume), 1 mg/m ³ (dusts and mists)
Barium Nitrate	TWA 0.5 mg/m ³	TWA 0.5 mg/m ³

Exposure controls

Engineering Controls

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

Personal Protective Equipment

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. When cleaning up spilled contents, wear 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): Grey 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: No data available
Odor: No data available		Flammability Limits: No data available	Relative Density: No data available
Flammability: No data available		Viscosity: No data available	
Partition Coefficient: No data available			Decomposition Temperature: No data available
Auto Ignition Temperature: No data available			

10. Stability and Reactivity

Chemical Stability Stable	Reactivity: No information available	Possibility of Hazardous Reactions Hazardous polymerization will not occur
Conditions to Avoid Acids, extremely high temperatures, wet conditions, and ignition sources	Incompatible Materials Strong oxidizers, strong acids, oxidizing or reducing agents. Liquid acids of any kind.	Hazardous Decomposition Products Strontium oxides. Carbon monoxide and dioxide. Nitrous oxides, Magnesium hydroxides and oxides.

11. Toxicology Information

Ingredient acute toxicity information

Toxicology	Oral LD50	skin LD50	LC50
Strontium Peroxide	Rat: 980 mg/kg	Not available	Not available
Polyprop Polymer	Not available	Not available	Not available
Magnesium	Rat: 230 mg/kg	Not available	Not available
Strontium Nitrate	Rat: 2750 mg/kg	Not available	Not available
Aluminum	Rat : > 2,000 mg/kg	Rat - 4 h - > 888 mg/l	not available
Polyvinyl Chloride	Rat: >5000 mg/kg	Not available	Not available
Black Powder	Rat: 5000 mg/kg	Not available	Not available
Iron	Rat: 30000 mg/kg	Not available	Not available
Copper	Rat: 5800 mg/kg	Not available	Not available
Barium Nitrate	Rat: 390 mg/kg	not available	not available

Product toxicological information

Acute Toxicity	Not classified – <i>Acute Toxicity Estimate yields oral LD₅₀ over 5000 mg/kgbw</i>
Skin Irritation / Corrosion	Category 2 – <i>over 10% of ingredients classified as a Category 2</i>
Serious Eye Damage / Irritation	Category 1 – <i>over 10% of ingredients classified as a Category 1</i>
Respiratory / Skin Sensitization	No information found
Germ Cell Mutagen	No information found
Carcinogen	Category 2 – <i>over 0.1% of ingredients classified as Category 2 carcinogens</i>
Reproductive Toxicity	No information found
STOT – single exposure	Category 3 – <i>respiratory over 10% of ingredients classified as a Category 3 respiratory STOT hazard</i>
STOT – repeated exposure	No information found
Aspiration Hazard	No information found

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 Absorption of strontium peroxide into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. Prolonged or repeated skin contact with contents may cause dermatitis.

Interactive effects No information found

12. Ecological Information

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

Aquatic Toxicity	Strontium Nitrate: <i>Acute toxicity - Fishes, Carassius auratus, LC100, 9,615 mg/l; Chronic toxicity - Fishes, Gasterosteus aculeatus, LC100, 2.912 mg/l</i>
	Magnesium: <i>LC50 1355 mg/l fish</i>
Persistence / Degradability	No information found
Bioaccumulation / Accumulation	No information found
Mobility in Environmental Media	Strontium Nitrate: <i>Water: considerable solubility and mobility; Soil/sediments non-significant adsorption</i>
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.



14. Transportation Information

Domestic & International	ID Number	shipping name	hazard class	packing group	EX Number	Reportable Quantities
	UN0312	Cartridges, Signal	1.4G	n/a	EX1992030413	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
Strontium Peroxide	yes	no	no	no	no	no	yes	no	yes	yes	no
Polyprop Polymer	yes	no	no	no	no	no	no	no	no	no	no
Magnesium	yes	no	no	no	no	no	no	no	yes	yes	no
Strontium Nitrate	yes	no	no	no	yes	no	yes	no	no	yes	no
Aluminum	yes	no	no	no	yes	no	no	no	no	no	no
Polyvinyl Chloride	yes	no	no	no	no	no	yes	no	no	no	no
Black Powder	yes	no	no	no	no	no	yes	yes	yes	yes	yes
Iron	yes	no	no	no	no	no	no	no	yes	no	no
Copper	yes	yes	yes	no	yes	no	yes	no	yes	no	no
Barium Nitrate	yes	no	no	no	yes	no	yes	no	no	yes	no

US States	Prop 65	NJ	PA	Canada	WHMIS	DSL	Europe	wgk
Strontium Peroxide	no	yes	no		C oxidizing material	yes		not listed
Polyprop Polymer	no	no	no		Not controlled	yes		not listed
					B6 Reactive flammable material:			
Magnesium	no	yes	yes		B4 Flammable solid; F Dangerously reactive material	yes		nwg
Aluminum	no	yes	yes		Not controlled	yes		nwg
Strontium Nitrate	no	yes	no		C Oxidizing materials	yes		2
Polyvinyl Chloride	no	yes	no		D1B Toxic materials			
Black Powder	yes	yes	no		D2B Toxic materials	yes		not listed
Iron	no	yes	yes		Not controlled	yes		nwg
Copper	no	yes	yes		D-2B: Material causing other toxic effects	yes		nwg
Barium Nitrate	no	yes	yes		B4 flammable solid	yes		nwg
					B4 flammable solid	yes		nwg
					D2B Toxic materials	yes		nwg
					C oxidizing material			
					D1A very toxic material T2R toxic material	yes		1

16. Other Information

Revision Information: June 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

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