

SECTION I - IDENTIFICATION

PRODUCT NAME: MARINE HAND HELD RED FLARE	
CHEMICAL FAMILY: Pyrotechnic Device	FORMULA: Mixed TRADE NAME: As above.
DESCRIPTION: A signal which, when activated, produces a bright, red flame.	CAS NO.: N/A

SECTION II - NORMAL HANDLING PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: KEEP OUT OF REACH OF CHILDREN Store in a cool, dry place away from all sources of ignition. Do not dismantle. Do not allow contents to touch eyes, skin or clothing. Do not ingest contents. Avoid breathing dust. Flush areas contacted with large amount of water. Do not attempt to ignite or burn this product inside a building or vehicle. Flares should be allowed to burn to completion. Unburned and partially burned flares contain potassium perchlorate which should not be allowed to come into contact with surface and ground water. Perchlorate Material – special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate	
PROTECTIVE EQUIPMENT	VENTILATION REQUIREMENTS
Eyes: Goggles when handling broken containers. Gloves: None required unless prolonged handling is anticipated. Other: Respirator if contents become airborne.	Outdoor use only

SECTION III - HAZARDOUS INGREDIENTS

BASIC MATERIALS:	OSHA PEL	LD 50	LC 50	SIGNIFICANT EFFECTS:
Strontium Nitrate CAS# 10042-76-9	None Est.	2750 mg/kg (oral/rat)	None Est.	Acute: irritation of bronchi, vomiting, choking. Chronic: headaches. Irritant to skin, eyes & mucous membranes. Absorption can cause Methemoglobinemia and kidney injury. Ingestion may cause gastroenteritis. Reactive oxidizer-keep away from fuels. Dust may cause eye and mucous membrane irritation. Irritation to skin, eyes and respiratory tract. Irritant to eyes, skin & mucous membranes. Ingestion of large amount can be fatal.
Potassium Perchlorate CAS# 7778-74-7	None Est.	Unknown	Unknown	
Sulfur CAS# 7704-34-9	None Est.	No data	No data	
Fuel Oil CAS# 68476-30-2	None Est.	>5ml/kg Dermal/rabbit	No data	
Potassium Chlorate CAS# 3811-04-9	None Est.	7000 mg/kg	No data	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Auto Ignition of Contents: Unknown	DOT CLASS: 1.4S	U.N. NUMBER: 0373	FLAMMABLE EXPLOSIVE LIMITS	LOWER: N/A	UPPER: N/A
EXTINGUISHING MEDIA: Water deluge, sand. Collect water/sand for approved disposal. Keep from entering surface or ground water.					
SPECIAL FIRE HAZARD & FIRE FIGHTING PROCEDURES: Use NIOSH/MSHA approved self-contained breathing apparatus when this material is involved in a fire.					

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: None established.
SYMPTOMS OF OVER EXPOSURE: Skin, eye and mucous membrane irritation or dermatitis, narcosis, cyanosis.
SKIN: If exposed to contents, flush thoroughly with water.
EYES: If exposed to contents, flush at least 15 minutes with water. Call a physician.
INGESTION: Call a physician immediately
INHALATION If exposed to contents, move victim to fresh air. Call a physician if adverse symptoms persist.

SECTION VI - TOXICOLOGY

MARINE HAND HELD RED FLARE

ACUTE ORAL LD 50:	No available data.	CARCINOGENICITY:	Not known to be a carcinogen.
ACUTE DERMAL LD 50:	No available data.	MUTAGENICITY:	No ingredients are known to be mutagens.
ACUTE INHALATION LC 50:	No available data.		
PRINCIPAL ROUTES OF ABSORPTION:	Inhalation or ingestion of contents.		
EFFECTS OF ACUTE EXPOSURE:	Can cause skin, eye and mucous membrane irritation; dermatitis and nausea.		
EFFECTS OF CHRONIC EXPOSURE:	Content dust – dermatitis, gradual cyanosis. Ingestion of potassium perchlorate may disrupt the proper functioning of the thyroid gland. Additional information may be obtained from the National Academy of Sciences concerning the effects of potassium perchlorate on humans.		

SECTION VII - SPILL AND LEAKAGE PROCEDURES (Control Procedures)

ACTION FOR MATERIAL RELEASE OR SPILL :
Remove all sources of ignition. Wear NIOSH/MSHA approved dust respirator. Follow OSHA regulations for respirator use, See CFR 1910.134). Shovel or sweep up and place in an approved DOT container using non-sparking utensils. Minimize contamination with organic material. Do not return material to original container. Isolate and <i>DO NOT SEAL</i> . Wash all contaminated clothing before reuse. In the event of a large spill, call the emergency number listed below. If the spill area is washed with water, collect wash water for approved disposal. Keep from entering water sources and sewers.
TRANSPORTATION EMERGENCY, CONTACT CHEMTREC – 800-424-9300
WASTE DISPOSAL METHOD:
Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures. Open burning in a lined pit is the preferred method of disposal of pyrotechnic materials, in accordance with federal, state and local regulations. Fusees should be allowed to burn to completion. Partially burned, unburned flares, and ash from burned flares should be disposed of in accordance with federal, state, and local requirements. Refer to 40 CFR 261.20 -24 to determine at the time of disposal whether the product should be classified as a hazardous waste. Do not store partially burned fusees in a vehicle, closed container, warehouse, or any other building. 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.

SECTION VIII - SHIPPING DATA

DOT CLASS:	Signal devices, Hand, 1.4S, UN0373, PGII	EX-8604106
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SECTION IX - REACTIVITY DATA

STABLE:	UNSTABLE: X	_____ °C	greater than 240 °F	HAZARDOUS POLYMERIZATION	MAY OCCUR WILL NOT OCCUR: X
CONDITIONS TO AVOID					
Keep all sources of ignition away from the signal and ingredients. Do not expose to temperatures above 160°F.					
Do not remain in an area where the ingredients have become airborne as a dust without wearing an approved respirator.					
INCOMPATIBILITY (Material to avoid): Avoid exposure to moisture, strong fuels, strong acids and strong bases.					
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon dioxide, Sulfur Oxides and Nitrogen Oxides.					

SECTION X - PHYSICAL DATA

MELTING POINT:	No data	VAPOR PRESSURE:	No data	VOLATILES:	No data
BOILING POINT:	No data	SOLUBILITY IN WATER:	No data	EVAPORATION RATE:	No data
SPECIFIC GRAVITY (H ₂ O=1):	No data	pH:	No data	VAPOR DENSITY (Air=1):	No data

INFORMATION COMPILED BY

ORION SAFETY PRODUCTS

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