

SECTION I - IDENTIFICATION

PRODUCT NAME & SYNONYMS: 12 Gauge Marine Aerial Signal (red or white)	
CHEMICAL FAMILY: Not Applicable	FORMULA: Mixture
TRADE NAME: 12 Gauge Signal	
DESCRIPTION: A shortened shotgun shell containing a star which burns red or white upon ignition.	CAS NO: Not Applicable

SECTION II - NORMAL HANDLING PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: (KEEP OUT OF REACH OF CHILDREN)
 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. Do not disassemble signal. Do not attempt to ignite or burn this product inside a building or vehicle.

PROTECTIVE EQUIPMENT	VENTILATION REQUIREMENTS
EYES: Goggles when handling broken containers. GLOVES: None required. OTHER: None required.	Outdoor use only.

SECTION III - HAZARDOUS INGREDIENTS

BASIC MATERIALS	OSHA PEL	LD 50	LC 50	SIGNIFICANT EFFECTS
Magnesium CAS# 7439-95-4	15 mg/m ³	230 mg/Kg (rat)	No Data	Heart beat alteration. Inflammation and local lesions on skin.
Strontium nitrate CAS# 10042-76-9	None Est.	2750mg/Kg (rat)	No Data	Irritant to skin, eyes & mucous membranes
Strontium peroxide CAS# 1314-18-7	Not Known	Not Known	Not Known	May cause irritation to eyes, mucous membranes, moist skin.
Polyvinyl chloride CAS# 9002-86-2	1 ppm	Not Known	Not Known	May contain vinyl chloride, a suspected cancer-causing agent.
Black Powder	None Est.	None Est.	None Est.	Explosive. Dust may be irritant.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Auto Ignition of Contents: >180°F	OSHA CLASSIFICATION: 1.4G Explosive	FLAMMABLE EXPLOSIVE LIMITS	LOWER: Not Known	UPPER: Not Known
EXTINGUISHING MEDIA: Water deluge. Suffocation techniques may be ineffective.				
SPECIAL FIRE HAZARD & FIRE FIGHTING PROCEDURES: Use NIOSH/MSHA approved self-contained breathing apparatus when signals are involved in a fire.				

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: None established.
SYMPTOMS OF OVER EXPOSURE: Contents of star can cause skin, eye and mucous membrane irritation; dermatitis.
SKIN: If exposed to contents, flush thoroughly with water.
EYES: If exposed to contents, flush with water for 15 minutes, call a physician.
INGESTION: Call a physician immediately.
INHALATION: If star contents are inhaled, move victim to fresh air. Call a physician.

SECTION VI - TOXICOLOGY (Contents of Signal) 12 Gauge Marine Aerial Signal (red or white)

ACUTE ORAL LD 50: No available data.	CARCINOGENICITY: Not known to be carcinogenic.
ACUTE DERMAL LD 50: No available data.	MUTAGENICITY: Not known to be mutagenic.
ACUTE INHALATION LC 50: No available data.	
PRINCIPAL ROUTES OF ABSORPTION: Inhalation of contents.	
EFFECTS OF ACUTE EXPOSURE: Contents can cause skin, eye and mucous membrane irritation; dermatitis.	
EFFECTS OF CHRONIC EXPOSURE: Content dust may cause dermatitis.	

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 if there are dusty conditions. (Follow OSHA regulations for respirator use. See 29 CFR 1910.134.) Use non-sparking utensils to sweep or shovel up and place in an approved DOT container. Do not return material to original container. Isolate and DO NOT SEAL . Wash all contaminated clothing before re-use. In the event of a large spill, call the emergency telephone number listed below.	
TRANSPORTATION EMERGENCY, CONTACT CHEMTREC 1-800-424-9300	
WASTE DISPOSAL METHOD: 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.	

SECTION VIII - SHIPPING DATA

DOT CLASS: Cartridges, Signal, Packing Group II; Label: Red: 1.4G, UN0312, EX-8604108; White: 1.4S, UN0405, EX-8606151
--

SECTION IX - REACTIVITY DATA

STABLE: <input checked="" type="checkbox"/> UNSTABLE: <input type="checkbox"/> AT _____ °C _____ °F	HAZARDOUS POLYMERIZATION	MAY OCCUR: WILL NOT OCCUR: <input checked="" type="checkbox"/>
CONDITIONS TO AVOID: Exposure of the signal to temperatures in excess of 150°F may cause weakening of the signal body.		
INCOMPATIBILITY (Material to avoid): None known.		
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon Dioxide, Nitrous oxides, Magnesium hydroxides and oxides.		

SECTION X - PHYSICAL DATA

MELTING POINT Not Applicable	VAPOR PRESSURE No Data	VOLATILES No Data
BOILING POINT Not Applicable	SOLUBILITY IN WATER No Data	EVAPORATION RATE No Data
SPECIFIC GRAVITY (H ₂ O=1) No Data	pH Not Applicable	VAPOR DENSITY (Air=1) Not Applicable

INFORMATION FURNISHED BY: **ORION SAFETY PRODUCTS** **DATE:** August, 2006
3157 N 500 W
Peru, IN 46970
1-800-851-5260

This information is accurate to the best knowledge of 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 HERIN 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.