

**ORION SAFETY PRODUCTS**  
RAILWAY & HIGHWAY FUSEES  
MARINE SIGNAL PRODUCTS



**MATERIAL SAFETY DATA**  
EMERGENCY CONTACT: CHEMTREC  
1-800-424-9300

### SECTION I - IDENTIFICATION

PRODUCT NAME & SYNONYMS: <b>ORION SKYBLAZER XLT and XLT, TWIN</b> <b>ORION SKYBLAZER II XLT and XLT TWIN</b>	
DESCRIPTION: A dark gray powder consolidated into an aluminum cup	CAS NO. Not Applicable

### SECTION II - NORMAL HANDLING PROCEDURES

<b>PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: (KEEP OUT OF REACH OF CHILDREN)</b> 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. Do not disassemble signal. Remove bottom cap only if out-of-doors and preparing to activate 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 <sup>3</sup>	230 mg/Kg (rat)	No Data	Heart beat alteration. Inflammation and local lesions on skin.
Strontium Nitrate CAS# 10042-76-9	None Est.	2750 mg/Kg (rat)	No Data	Irritant to skin, eyes & mucous membranes
Polyvinyl Chloride CAS# 9002-86-2	1 ppm	Not Known	No Data	May contain vinyl chloride, a suspected carcinogen.
Dextrin CAS# 9004-53-9	5 mg/m <sup>3</sup>	None Est.	None Est.	Possible eye & mucous membrane irritant.
Black Powder	None Est.	None Est.	None Est.	Explosive. Dust may be irritant.
Strontium Peroxide CAS#1314-18-7	None Est.	None Est.	None Est.	Irritating to skin, eyes, lungs and mucus membranes
Ignitor Cup (Potassium Chlorate, Charcoal, Copper)	None Est.	None Est.	None Est.	May cause eye and mucus irritation (pot. chl)
Loaded Friction Wire (phosphorus)	None Est.	None Est.	None Est.	Irritating to eyes and skin on contact (phos)

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

AUTOIGNITION OF CONTENTS: >1800°F	OSHA CLASSIFICATION: 1.4G, Explosive	FLAMMABLE EXPLOSIVE LIMITS	LOWER: Not Known	UPPER: Not Known
EXTINGUISHING MEDIA: Water deluge. Suffocation techniques may be ineffective as oxidizers are included in the mixture.				
<b>SPECIAL FIRE HAZARD &amp; FIRE FIGHTING PROCEDURES:</b> Avoid the use of water (other than deluge) on large quantities due to magnesium metal content. Flaming projectiles may be ejected during a fire. 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:	Do not inhale smoke if signals are involved in a fire situation. If star contents are inhaled, move victim to fresh air. Call a physician.

**SECTION VI - TOXICOLOGY (Contents of Signal)**

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 or ingestion of contents. Inhalation of smoke. Exposure to smoke during use may aggravate asthma if inhaled.

EFFECTS OF ACUTE EXPOSURE: Contents can cause skin, eye and mucous membrane irritation; dermatitis.

EFFECTS OF CHRONIC EXPOSURE: Contents as a dust may cause dermatitis. Exposure to dust can irritate respiratory tract

**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. Signal should be allowed to burn to completion.

Partially burned, unburned signals, and ash from burned signals 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 signals in a vehicle, closed container, warehouse, or any other building

**SECTION VIII - SHIPPING DATA**

DOT CLASS: XLT Model: Flares, aerial, 1.4G, UN0403, Packing Group II, Label required 1.4G, EX-2002110107

TWIN XLT Model: Flares, aerial, 1.4G, UN0403, Packing Group II, Label required 1.4G, EX-2002110148

**SECTION IX - REACTIVITY DATA**

STABILITY: stable

HAZARDOUS POLYMERIZATION:

will not occur

**CONDITIONS TO AVOID:**

Exposure of the signal to temperatures in excess of 180°F may cause weakening of the signal body. Avoid open flames, extremely high temperatures and wet conditions.

**INCOMPATIBILITY (Material to avoid):**

Avoid exposure to organic solvents which might weaken the signal body.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Carbon monoxide, Nitrous oxides, Carbon dioxide, Magnesium hydroxides and oxides

**SECTION X - PHYSICAL DATA**

MELTING POINT &gt;500°F

VAPOR PRESSURE No Data

VOLATILES No Data

BOILING POINT Not Applicable

SOLUBILITY IN WATER Slight

EVAPORATION RATE Solid

SPECIFIC GRAVITY (H<sub>2</sub>O=1) No Data

VAPOR DENSITY (Air=1) Not Applicable pH Not Applicable

INFORMATION FURNISHED BY:

DATE: October 2009

ORION SAFETY PRODUCTS

3157 N 500 W / PERU, IN 46970

MARINE DIVISION 1-800-851-5260

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## U.S. Department of Justice

Bureau of Alcohol, Tobacco,  
Firearms and Explosives

MAY 23 2005

Washington, DC 20226

www.atf.gov

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Mr. Allen Engel  
Orion Safety Products  
3157 North 500 West  
Peru, Indiana 46970

Dear Mr. Engel:

The Explosives Industry Programs Branch (EIPB) of the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) has reviewed your facsimile dated May 3, 2005. You requested the exemption of marine distress signals from the regulations stipulated under 27 CFR, Part 555. We appreciate the opportunity to respond to you request and are approving your exemption.

Specifically, you have requested the exemption of the following marine distress signals:

ITEM	UN	EX	SHIPPING CLASS	CLASS	DESCRIPTION
Hand Held Red Flare	0373	8604106	Signal Devices, Hand	1.4S	Hand Held Red Flare Signal
Hand Held Orange Flare	0373	9708126	Signal Device, Hand	1.4S	Hand Held Orange Smoke Flare Signal
12 Gauge Red Meteor	0312	8604108	Cartridges, Signal	1.4G	12 Gauge Red Meteor Signal
12 Gauge White Meteor	0405	8606151	Cartridges, Signal	1.4S	12 Gauge White Meteor Signal
Pocket Rocket Meteor	0312	9203413	Cartridges, Signal	1.4G	Pocket Rocket Meteor Signal
25 MM Red Meteor	0405	8604107	Cartridges, Signal	1.4S	25 MM Red Meteor Signal
25 MM White Meteor	0312	9602080	Cartridges, Signal	1.4G	25 MM White Meteor Signal
25 MM Red Parachute	0405	8604110	Cartridges, Signal	1.4S	25 MM Red Parachute Signal
25 MM White Parachute	0312	0008082	Cartridges, Signal	1.4G	25 MM White Parachute Signal
Skyblazer XLT Signal	0403	2002110107	Flares, Aerial	1.4G	25 MM White Parachute Signal
Skyblazer Twin XLT Sig.	0403	2002110148	Flares, Aerial	1.4G	Twin Red Star Signal

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Mr. Allen Engel

ITEM	UN	EX	SHIPPING CLASS	CLASS	DESCRIPTION
12 GA Long Shell Red Signal	0403	2004110275	Flares, Aerial	1.4G	12 Gauge Long Shell Red Signal Blistered Package
12 GA Long Twin Shell Red Signal	0403	2004110275	Flares, Aerial	1.4G	12 Gauge Long Shell Twin Signal Bulk or Blistered
SOLAS Hand Held Red Flare	0191	2002070038	Signal Devices, Hand	1.4G	SOLAS Hand Held Red Flare Signal
SOLAS White Hand Held Flare	0191	2002070038	Signal Devices, Hand	1.4G	SOLAS Hand Held White Flare Signal

We are approving your request to exempt these listed items from the regulations stipulated under 27 CFR, Part 555. These items are designed to promote and assist public safety. In addition, these items are often required by other government agencies, such as the United States Coast Guard, to be present onboard boats and ships. Exempting these items does not pose a significant threat to public safety.

We trust the following has been responsive to your request. Should you require additional information, please contact the EIPB at 202-927-2310.

Sincerely yours,



Mark A. Siebert  
Deputy Chief, Arson and Explosives  
Programs Division

c: Special Agent in Charge, Columbus Field Division  
Area Supervisor, Cincinnati, Ohio, Area Office  
Chief, Federal Explosives Licensing Center



U.S. Department  
of Transportation

400 Seventh Street, S.W.,  
Washington, D.C. 20590

**Research and  
Special Programs  
Administration**

The US Department of Transportation  
Competent Authority for the United States

**CLASSIFICATION OF EXPLOSIVES**

Based upon a request by Orion Safety Products, P.O. Box 1047, 28320 St. Michaels Road, Easton, MD, the following items are classed in accordance with Section 173.56, Title 49, Code of Federal Regulations, (49 CFR). A copy of your application, all supporting documentation and a copy of this approval must be retained and made available to DOT upon request.

**U.N. PROPER SHIPPING NAME AND NUMBER:**

Articles, explosive, n.o.s., UN0353

**U.N. CLASSIFICATION CODE:** 1.4G

**REFERENCE NUMBER**

EX2002110108

**PRODUCT DESIGNATION/PART NUMBER**

Offshore Alert/Locate Kit

**NOTES:**

The following packaging instruction is assigned: Inner Packaging - Receptacle, Bag, plastic, floating, each containing a kit consisting of three Skyblazer aerial flares, three 12 Gauge "Meteor" signal cartridges, three hand-held flares, one orange smoke signal, one whistle and one mirror. Intermediate Packaging - Box, fiberboard, each containing one inner packaging. Outer Packaging - Specification 4G fiberboard box, each containing not more than four (4) intermediate packagings.

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**U.N. PROPER SHIPPING NAME AND NUMBER:**

Flares, aerial, UN0403

**U.N. CLASSIFICATION CODE:** 1.4G

**REFERENCE NUMBER**

EX2002110107

**PRODUCT DESIGNATION/PART NUMBER**

SK-1 (Skyblazer)

**NOTES - EX2002110107:**

This classification is only valid when the aerial flares are packaged by either of the following methods:

**Packaging Method A:**

Inner Packaging - Expanded plastic sheeting or bubble wrap between layers in the outer packaging.

Outer Packaging - Specification 4G fiberboard box, each containing not more than thirty-six aerial flares.

**Packaging Method B:**

Inner Packaging - Receptacle, plastic "clam-shell" type, each containing not more than three (3) aerial flares.

Outer Packaging - Specification 4G fiberboard box, each containing not more than six (6) inner packagings.

**U.N. PROPER SHIPPING NAME AND NUMBER:**

Articles, explosive, n.o.s., UN0353

**U.N. CLASSIFICATION CODE:** 1.4G**REFERENCE NUMBER**

EX2002110109

**PRODUCT DESIGNATION/PART NUMBER**

Coastal Alert/Locate Kit

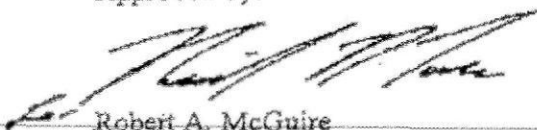
**NOTES:**

The following packaging instruction is assigned: Inner Packaging - Receptacle, plastic "clam-shell" type, each containing a kit consisting of two Skyblazer aerial flares, two hand-held flares, one whistle and one mirror.

Outer Packaging - Specification 4G fiberboard box, each containing not more than six (6) inner packagings.

**DATED:** November 18, 2002

Approved by:



Robert A. McGuire  
Associate Administrator for  
Hazardous Materials Safety

