

**SECTION I - IDENTIFICATION**

<b>PRODUCT NAME &amp; SYNONYMS</b>	Orion Star Tracer; Orion Star Tracer, Twin		
<b>CHEMICAL FAMILY</b>	Not Applicable	<b>FORMULA</b>	Mixture
		<b>TRADE NAME</b>	Star Tracer; Star Tracer, Twin
<b>DESCRIPTION</b>	A dark gray powder consolidated into an aluminum cup		<b>CAS NO.</b> 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. Do not disassemble signal. Remove bottom cap only if out-of-doors and preparing to activate signal.	
<b>PROTECTIVE EQUIPMENT</b>	<b>VENTILATION REQUIREMENTS</b>
<b>EYES</b> Goggles when handling broken containers. <b>GLOVES</b> None required. <b>OTHER</b> None required.	None beyond good room ventilation.

**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
Strontium Peroxide CAS# 1314-18-7	None Est.	Not Known	No Data	May cause burns to eyes, mucous membranes & moist skin.
Polyvinyl Chloride CAS# 9002-86-2	1 ppm	Not Known	No Data	May contain 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 if loose. Dust may be irritant.

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

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

**SECTION V - HEALTH HAZARD DATA**

<b>THRESHOLD LIMIT VALUE</b>	None established.
<b>SYMPTOMS OF OVER EXPOSURE</b>	Contents of star can cause skin, eye and mucous membrane irritation; dermatitis.
<b>SKIN</b>	If exposed to contents, flush thoroughly with water.
<b>EYES</b>	If exposed to contents, flush with water for 15 minutes, call a physician.
<b>INGESTION</b>	If star contents are ingested, drink large amount of water, induce vomiting if patient is conscious. Call a physician.
<b>INHALATION</b>	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 date.	CARCINOGENICITY	Not known to be carcinogenic.
ACUTE DERMAL LD 50	No available date.	MUTAGENICITY	Not known to be mutagenic.
ACUTE INHALATION LC 50	No available data.	IRRITANT	Eye and skin
PRINCIPAL ROUTES OF ABSORPTION		Inhalation or ingestion of contents.	
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)

<b>ACTION FOR MATERIAL RELEASE OR SPILL</b>	<p>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.</p> <p>Wash all contaminated clothing before re-use.</p> <p>In the event of a large spill, call the emergency telephone number listed below.</p> <p><b>TRANSPORTATION EMERGENCY, CONTACT CHEMTREC 1-800-424-9300</b></p>
<b>WASTE DISPOSAL METHOD</b>	<p>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.</p> <p>Open burning is preferred method of disposal for pyrotechnic materials.</p>

## SECTION VIII - SHIPPING DATA

<b>DOT CLASS</b>	Signal Devices, Hand, 1.4S, UN0373, Packing Group II, Label required 1.4S, EX-9702010
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## SECTION IX - REACTIVITY DATA

<b>STABLE</b> X	UNSTABLE	AT _____°C _____°F	<b>HAZARDOUS</b>	<b>MAY OCCUR</b>
			POLYMERIZATION	WILL NOT OCCUR X
<b>CONDITIONS TO AVOID</b>				
Exposure of the signal to temperatures in excess of 180°F may cause weakening of the signal body.				
<b>INCOMPATIBILITY (Material to avoid)</b>				
Avoid exposure to organic solvents which might weaken the signal body.				
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>				
Carbon monoxide, Nitrous oxides, Carbon dioxide.				

## 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 <sub>2</sub> O=1)	No Data	pH	Not Applicable	VAPOR DENSITY (Air=1)	Not Applicable

**INFORMATION FURNISHED BY:** R. McMahon  
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