### SECTION I - IDENTIFICATION

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>FUSEE, HIGHWAY FLARE, RAILWAY FLARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMICAL FAMILY</td>
<td>Pyrotechnic Device</td>
</tr>
<tr>
<td>FORMULA:</td>
<td>Mixture</td>
</tr>
<tr>
<td>TRADE NAME:</td>
<td>FUSEE/FLARE</td>
</tr>
<tr>
<td>DESCRIPTION:</td>
<td>A red cardboard tube containing a yellowish-tan, solid mixture.</td>
</tr>
</tbody>
</table>

### 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. Avoid breathing dust. Flush areas contacted with large amount of water. Molten material will be emitted when burning. Avoid using around flammable materials.

<table>
<thead>
<tr>
<th>PROTECTIVE EQUIPMENT</th>
<th>VENTILATION REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes:</td>
<td>Goggles when handling broken containers and tubes.</td>
</tr>
<tr>
<td>Gloves:</td>
<td>None required unless prolonged handling is anticipated.</td>
</tr>
<tr>
<td>Other:</td>
<td>Respirator if contents become airborne.</td>
</tr>
</tbody>
</table>

### SECTION III - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>BASIC MATERIALS</th>
<th>OSHA PEL</th>
<th>LD 50 (oral/rat)</th>
<th>LC 50</th>
<th>SIGNIFICANT EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strontium Nitrate CAS# 10042-76-9</td>
<td>None Est.</td>
<td>2750 mg/kg</td>
<td>None Est.</td>
<td>Irritant to skin, eyes and mucous membranes.</td>
</tr>
<tr>
<td>Potassium Perchlorate CAS# 7778-74-7</td>
<td>None Est.</td>
<td>No Data</td>
<td>No Data</td>
<td>Irritant to skin, eyes &amp; mucous membranes.</td>
</tr>
<tr>
<td>Sulfur CAS# 7704-34-9</td>
<td>None Est.</td>
<td>No data</td>
<td>No data</td>
<td>Reactive oxidizer-keep away from fuels.</td>
</tr>
<tr>
<td>Sawdust/oil binder CAS# None.</td>
<td>None Est.</td>
<td></td>
<td></td>
<td>May be irritation to skin, eyes and mucous membranes.</td>
</tr>
</tbody>
</table>

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

**FLASH POINT/METHOD:** Contents: >167°F/Oven

**OSHA CLASSIFICATION:** Flammable Solid – 4.1

**FLAMMABLE EXPLOSIVE LIMITS**
LOWER: None Estab.  UPPER: None Estab.

**EXTINGUISHING MEDIA:** Water deluge. **SUDDOICATION TECHNIQUES MAY BE MINIMALLY EFFECTIVE.**

**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:** Tube contents are irritating to the eyes, respiratory tract and skin.

**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:** If ingested drink a large amount of water, induce vomiting and call a physician.

**INHALATION:** Immediately move victim to fresh air. Call a physician if adverse symptoms persist.
SECTION VI - TOXICOLOGY

ACUTE ORAL LD 50: Approximately 3 grams/kg (rat) CARCINOGENICITY: Not known to be a carcinogen.
ACUTE DERMAL LD 50: Approx. 2 grams/kg (rabbit) MUTAGENICITY: No ingredients are known to be mutagens
ACUTE INHALATION LC 50: Not established IRRITANT TO EYES & SKIN UPON CONTACT

PRINCIPAL ROUTES OF ABSORPTION: Inhalation or dermal contact.

EFFECTS OF ACUTE EXPOSURE: Tube contents are irritating to eyes, skin and respiratory tract. Combustion products will irritate eyes, respiratory tract and mucous membranes.

EFFECTS OF CHRONIC EXPOSURE: None known.

SECTION VII - SPILL AND LEAKAGE PROCEDURES (Control Procedures)

ACTION FOR MATERIAL RELEASE OR SPILL: For large amounts remove all sources of ignition. If tubes are broken wear NIOSH/MSHA approved dust respirator, goggles impervious coveralls, gloves and boots. Follow OSHA regulations for respirator use, (See 29 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. Place swept material into fresh container, isolate and DO NOT SEAL. Wash all contaminated clothing before reuse. In the event of a large spill, call the emergency number listed below.
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 is the preferred method of disposal of pyrotechnic materials but must be done in compliance with federal, state and local regulations.

SECTION VIII - SHIPPING DATA

DOT CLASS (Domestic): Fusee, 4.1, NA1325, PG II (ground only), EX-9209001 LABEL REQUIRED: 4.1
INTERNATIONAL CLASS & DOMESTIC AIR: Signal Devices, Hand, 1.4S, UN0373, PG II, EX-9209001 LABEL REQUIRED: 1.4S

SECTION IX - REACTIVITY DATA

STABLE ___X___ UNSTABLE @____°C
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. Avoid high temperatures.

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: Components partially EVAPORATION RATE: No data
SPECIFIC GRAVITY (H2O=1): No data pH: No data VAPOR DENSITY (Air=1): No data

INFORMATION COMPiled BY: R. McMahon Date: December 30, 2002 Orion Safety Products
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