1. Product and Company Identification

**Fluorescein Dye Marker**

**SAR Fluorescein Dye Marker**

Orion Safety Products
3157 North 500 West
Peru, IN 46970

Use: Emergency signal

Phone Number:
US 1-800-851-5260
Intl (11) 1-765-472-4375

EMERGENCY CHEMTREC 1-800-424-9300

2. Hazards Identification

**Emergency Overview**

**Hazard Statements:**
Causes eye irritation

**Precautionary Statements:**
Keep out of reach of children.
Do not dismantle.
Do not get in eyes, on skin, or on clothing

**NFPA Rating**
Flammability 2
Health 1
Reactivity 0

**HMIS Rating**
Flammability 2
Health 1
Physical Hazard 0

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>EINCS #</th>
<th>% inage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Fluorescein</td>
<td>518-47-8</td>
<td>208-253-0</td>
<td>&gt;50%</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>144-55-8</td>
<td>205-633-8</td>
<td>&lt;50%</td>
</tr>
<tr>
<td>Adipic Acid</td>
<td>124-04-9</td>
<td>204-673-3</td>
<td>&lt;20%</td>
</tr>
</tbody>
</table>

4. First Aid Measures

**Inhalation**
If contents are inhaled, remove to fresh air. If not breathing, give artificial respiration and get medical aid.

**Skin**
If contents are contacted, wash with area with soap and water for 15 minutes. Get medical aid if irritation occurs.

**Eyes**
If contents get into eye, flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if easily possible. Get medical aid immediately.

**Ingestion**
Get medical aid immediately.

5. Firefighting Measures

**Extinguishing Media**
Water Deluge

**Unsuitable Extinguishing Media**
Do not use foam or dry chemical.

**Protective Equipment and Precautions for Firefighters**
Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

**Specific Hazards Arising from the Chemical**
Avoid dust / air suspensions. As with any organic powder, the contents may be capable of a dust explosion.

**Flashpoint**
Not Applicable

**Flammability Limits**
Not Applicable

**Ignition Temperature**
>167°F

6. Accidental Release Measures

**Personal Precautions**
Do not breathe contents and avoid contact with skin and eyes. Dye will stain / color all exposed areas - wear Tyvek coveralls, goggles or face mask, dust mask / respirator and booties if available. If not, wear clothing with long sleeves, long pant legs, dust mask, rubber or nitrile gloves, safety goggles, and safety shoes when cleaning up contents.

**Environmental Precautions**
Contents are highly soluble in water and the dye has a great ability to migrate.

**Methods for Containment and Clean-up**
Place absorbent material onto floor before sweeping. Clean area in a manner so as to minimize dust. Wear gloves, safety glasses/goggles, and full-coverage clothing to minimize exposure and dye effects. For large spills, a dust mask is recommended. Pick up spill for recovery or disposal and place in lidded container. Wash area with soap and plenty of water. Material is completely gone when no additional green color is detected in wash water.

**dye**

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### 7. Handling and Storage

**Handling**  
Contents will stain – handle with caution. Wear appropriate eye protection when using. Follow instructions on package. Avoid ingestion and inhalation of contents. Wash thoroughly after handling. Do not disassemble signal.

**Storage**  
Store in a cool, dry place. Store away from food and beverages. Keep at temperature not exceeding 60 °C (140 °F)

### 8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Exposure Limits</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Flourescin</td>
<td>10mg/m³</td>
<td>Nuisance particulates 10mg/m³ total</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>5mg/m³ respirable dust fraction</td>
<td>None established</td>
</tr>
<tr>
<td>Adipic Acid</td>
<td>None established</td>
<td>5mg/m³</td>
</tr>
</tbody>
</table>

**Engineering Controls**  
When cleaning up contents, use local and/or general exhaust.

**Eye / Face Protection**  
Safety glasses or goggles

**Skin Protection**  
No significant health effects but contents will stain all exposed areas. Wear Tyvek coveralls, rubber or nitrile gloves, and booties if available. If not, wear clothing with long sleeves, long pant legs, rubber or nitrile gloves, and safety shoes when cleaning up contents. Wash hands and face before eating, drinking or using tobacco products.

**Respiratory Protection**  
None under normal conditions when using product. A particulate respirator (NIOSH T N95 or better filters) may be worn during the cleanup of spilled contents.

**General Hygiene**  
Educate and train employees in the safe use and handling of hazardous materials. Maintain good housekeeping and safety practices. Do not let contents accumulate in storage or work areas. Clean spills up promptly.

### 9. Physical and Chemical Properties

**Appearance (color, physical form, shape):** Orange and black rubber capsule containing water activated dye powder

**pH:** Not available

**Melting Point:** >290F

**Solubility:** Highly soluble

**Boiling Point:** Not applicable

**Freezing Point:** Not applicable

**Evaporation Rate:** Not applicable

**Vapor Pressure:** Not applicable

**Specific Gravity:** Not applicable

**Vapor Density:** Not applicable

### 10. Stability and Reactivity

**Chemical Stability**  
Stable

**Possibility of Hazardous Reactions**  
Hazardous polymerization will not occur.

**Conditions to Avoid**  
Excessive temperatures, moisture, water, acids, and ignition sources.

**Incompatible Materials**  
Oxidizing agents, acids

**Hazardous Decomposition Products**  
Nitrogen oxides, carbon monoxide, carbon dioxide

### 11. Toxicology Information

<table>
<thead>
<tr>
<th>Toxicology</th>
<th>Oral LD50</th>
<th>skin LD50</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Flourescin</td>
<td>mouse: 4738 mg/kg</td>
<td>No Data</td>
<td>No Data</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>rat &gt; 4,000 mg/kg</td>
<td>No Data</td>
<td>rat 4.74 mg/l</td>
</tr>
<tr>
<td>Adipic Acid</td>
<td>rat &lt; 5,000 mg/kg</td>
<td>rabbit &gt; 7,940 mg/kg</td>
<td>No Data</td>
</tr>
</tbody>
</table>

**Acute Dose Effects**  
Contact with contents may cause mild eye irritation. Contact with material may dye skin and discolor perspiration and urine.

**Irritation**  
Contact with contents may cause mild eye irritation

**Carcinogenicity**  
None of the ingredients are listed by NTP, IARC or regulated as a Carcinogen by OSHA

**Genetic Effects**  
No information found

**Developmental Effects**  
No information found

**Target Organ Effects**  
Eye, skin

**Repeated Dose Effects**  
No known chronic effects. Repeated or prolong exposure to this compound is not known to aggravate medical conditions.

**Corrosivity**  
No information found

**Reproductive Effects**  
No information found

**Neurological Effects**  
No information found

**Sensitization**  
No information found

### 12. Ecological Information

**Aquatic Toxicity**

<table>
<thead>
<tr>
<th>Sodium Flourescin</th>
<th>LC50 - Oncorhynchus mykiss (rainbow trout) - 1.372 mg/L - 96 h, EC50 - Daphnia pulex (Water Flea) - 337 mg/L - 48 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Bicarbonate</td>
<td>Fishes, Oncorhynchus mykiss, L50, 96 h, 7,700 mg/L - Fishes, Lepies macrochirus, LC50, 96 h, 7,100 mg/L - Fishes, Lepies macrochirus, NOEC, 96 h, 5,200 mg/L - Crustaceans, Daphnia magna, EC50, 48 h, 4,100 mg/L - Crustaceans, Daphnia magna, NOEC, 48 h, 3,100 mg/L</td>
</tr>
<tr>
<td>Adipic Acid</td>
<td>Warm water fish: 96-hr LC50 in Fathead minnow: 97 mg/L</td>
</tr>
</tbody>
</table>

| Harmful Cold water fish: 48-hour LC50 in Rainbow trout: > 100 mg/L, Practically nontoxic |

**Persistence / Degradability**  
No information found

**Bioaccumulation / Accumulation**  
No information found

**Mobility in Environmental Media**  
No information found
13. Disposal Considerations

Dispose of contaminated product, empty container 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. This material is not considered to be a hazardous waste and no special disposal requirements are expected.

14. Transportation Information

<table>
<thead>
<tr>
<th>United States &amp; International</th>
<th>shipping name</th>
<th>hazard class</th>
<th>ID Number</th>
<th>packing group</th>
<th>EX Number</th>
<th>Reportable Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-hazardous</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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</tbody>
</table>

15. Regulatory Information

<table>
<thead>
<tr>
<th>Sodium Fluorescein</th>
<th>TSCA</th>
<th>CERCLA</th>
<th>CWA</th>
<th>SARA 313</th>
<th>Acute</th>
<th>Chronic</th>
<th>Fire</th>
<th>Reactivity</th>
<th>Pressure</th>
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<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Adipic Acid</td>
<td>Yes</td>
<td>5000 lb or 2270 kg</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sodium Fluorescein</th>
<th>Prop 65</th>
<th>NJ</th>
<th>PA</th>
<th>Canada</th>
<th>WHMIS</th>
<th>DSL</th>
<th>Europe</th>
<th>wgk</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Not listed</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Not listed</td>
<td>1</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Not meet criteria</td>
<td>Yes</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adipic Acid</td>
<td>No</td>
<td>0026</td>
<td>No</td>
<td>D2B</td>
<td>Yes</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. Other Information

Revision Information: November, 2011

Risk and Safety Phrases:
R36 Irritating to eyes.
S2 Keep out of the reach of children.
S25 Avoid contact with eyes.

Key / Legend:
HMIS: hazardous material identification system
NIAPA: national fire protection association
CAS: Chemical Abstracts Service number
EINECS: European inventory of existing chemical substances
OSHA PEL: occupational safety and health administration permissible exposure limit
NIOSH TLV: national institute of occupational safety and health Threshold Limit Value
NTP: National Toxicology Program
IARC: International Agency for Research on Cancer
TSCA: toxic substance control act - US
CERCLA: comprehensive environmental response, compensation and liability act - US
CWA: clean water act - US
CAA: clean air act - US
SARA: superfund amendments and reauthorization act - US
PROP 65: California’s Proposition 65 list
WHMIS: workplace hazardous materials information system - Canada
DSL: Domestic Substances List - Canada
WGK: water hazard classes - Germany

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