SAFETY DATA SHEET

1. Product and Company Identification

**Fluorescein Dye Marker**

**Identified Use:** Emergency distress signal

**Manufacturers Information**

Orion Safety Products
3157 North 500 West
Peru, IN 46970
US 1-800-851-5260
Intl (11) 1-765-472-4375

**Emergency CHEMTREC**

1-800-424-9300

2. Hazards Identification

**GHS Classifications**

- **Eye Damage / Irritation** Category 1 - H318
- **STOT - Single Exposure** Category 3 - H335

**GHS Label Elements**

- **Pictograms**
  - Signal Word: Danger
  - Hazard Statements:
    - H318: Causes serious eye damage
    - H335: May cause respiratory irritation

- **Precautionary Statements**
  - P103: Keep out of reach of children
  - P370: In case of fire: use water deluge

**Hazards Not Otherwise Classified (HNOC):** none

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>EINCS #</th>
<th>%age</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>

Note: Due to Confidential Business Information i.e. “Trade Secrets”, the exact percentage of each ingredient has not been disclosed. CBI information will be shared with appropriate authorities if circumstances warrant.

4. First Aid Measures

**Description of first aid measures**

- **Inhalation:** If contents are inhaled, remove to fresh air. Watch for signs of allergic reaction. If other symptoms develop, get medical aid immediately.
- **Skin:** If contents are contacted, wash with area with soap and water for 15 minutes. Remove contaminated clothing and wash before reuse. 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.

**Most important symptoms and effects both acute and delayed**

See section 2 labeling and section 11

**Indication of any immediate medical attention and special treatment needed**

No data available

5. Firefighting Measures

**Extinguishing Media**

Water deluge

**Unsuitable Extinguishing Media**

Foam and dry chemical extinguishers and suffocation are ineffective.

- **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 fire.

**Further Information**

No data available
6. Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures
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 dust 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.

7. Handling and Storage

Precautions for Safe 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.

Conditions for Safe Storage, Including Any Incompatibilities
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

Control parameters
Exposure Limits
<table>
<thead>
<tr>
<th>Substance</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Fluorescein</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Adipic Acid</td>
<td>None established</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

Exposure controls
When cleaning up contents, use local and/or general exhaust.

Personal Protective Equipment
Eye / Face Protection
Wear safety glasses or goggles when cleaning up spilled contents.

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 powder

Boiling Point / Range:
Not applicable

Melting Point:
Not available

pH:
Not available

Solubility:
Not available

Vapor Pressure:
Not applicable

Specific Gravity:
Not applicable

Vapor Density:
Not applicable

Odor:
No data available

Evaporation Rate:
Not applicable

Odor Threshold:
No data available

Flammability Limits:
No data available

Relative Density:
No data available

Partition Coefficient:
No data available

Viscosity:
No data available

Flash Point:
Not available

Auto Ignition Temperature:
No data available

Decomposition Temperature:
No data available

10. Stability and Reactivity

Chemical Stability
Stable

Reactivity:
No information available

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

Incompatible Materials
Oxidizing agents, acids

Hazardous Decomposition Products
Nitrogen oxides, carbon monoxide, carbon dioxide

11. Toxicology Information

Ingredient acute toxicity information

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral LD50</th>
<th>skin LD50</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Fluorescein</td>
<td>Rat: 6,721 mg/kg</td>
<td>not available</td>
<td>not available</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>Rat: 4,220 mg/kg</td>
<td>not available</td>
<td>not available</td>
</tr>
<tr>
<td>Adipic Acid</td>
<td>Rat: 5,560 mg/kg</td>
<td>Rabbit: 7,940 mg/kg</td>
<td>Rat: 4 h – &gt; 7.7 mg/l</td>
</tr>
</tbody>
</table>

Acute Toxicity
Not classified – Acute Toxicity Estimate yields oral LD₅₀ over 5000 mg/kg bw

Skin Irritation / Corrosion
No information found

Serious Eye Damage / Irritation
Category 1 – over 0.1% of ingredients classified as a Category 1

Respiratory / Skin Sensitization
No information found

No information found
Germ Cell Mutagen: No information found
Carcinogen: No information found
Reproductive Toxicity: No information found
STOT – single exposure: Category 3 – respiratory over 20% of ingredients classified as a Category 3 respiratory STOT hazard
STOT – repeated exposure: No information found
Aspiration Hazard: No information found

Likely routes of exposure:
Skin, ingestion, inhalation

Symptoms related to the physical, chemical and toxicological characteristics: No information found
Delayed and immediate effects and chronic effects from short and long term exposure: No information found
Interactive effects: No information found

12. Ecological Information

Ingredient toxicity / persistence / degradability / bioaccumulation / mobility in soil and water

Aquatic Toxicity
- Sodium Fluorescein: LC50 Oncorhynchus mykiss (rainbow trout) - 1,372 mg/l - 96 h; EC50: Daphnia pulex (Water flea) - 337 mg/l - 48 h
- Sodium Bicarbonate: LC50 freshwater fish 8250 - 9000 mg/L 96 h ; EC50: freshwater algae 650 mg/L/120h; EC50: 2350 water flea mg/L/48h
- Adipic Acid: LC50 - Brachydanio rerio (zebrafish) >= 1,000 mg/l - 96 h; LC50 - Daphnia magna (Water flea) - 46 mg/l - 48h; EC50: Pseudokirchneriella subcapitata (aglae) - 59 mg/l - 72 h

Persistence / Degradability
- Sodium Bicarbonate: Soluble in water Persistence is unlikely based on information available
- Adipic Acid: Readily biodegradable

Bioaccumulation / Accumulation: No information found
Mobility in Environmental Media: Sodium Bicarbonate - Will likely be mobile in the environment due to its water solubility

Other adverse effects: No information found

13. Disposal Considerations (for spills and leakage)
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>Domestic &amp; International</th>
<th>ID Number</th>
<th>shipping name</th>
<th>hazard class</th>
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<tbody>
<tr>
<td></td>
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<td>Non-hazardous</td>
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<td>Marine Pollutant:</td>
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<td></td>
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<td>Special precautions for user: No information available</td>
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15. Regulatory Information

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<thead>
<tr>
<th>US Regulations</th>
<th>TSCA</th>
<th>CERCLA</th>
<th>CWA</th>
<th>CAA</th>
<th>SARA 313</th>
<th>SARA 302</th>
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<th>Chronic</th>
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<th>Reactivity</th>
<th>Pressure</th>
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<td>no</td>
<td>no</td>
<td>no</td>
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<tr>
<td>Sodium Bicarbonate</td>
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</tr>
<tr>
<td>Adipic Acid</td>
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<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
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<table>
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<tr>
<th>US States</th>
<th>Prop 65</th>
<th>NJ</th>
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<th>WHMIS</th>
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<tr>
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<td>yes</td>
<td>D2B Toxic materials</td>
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<td>Sodium Bicarbonate</td>
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<td>Adipic Acid</td>
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16. Other Information

Revision Information: June 2015

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<tr>
<th>NFPA Rating</th>
<th>HMIS Rating</th>
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<td>Flammability</td>
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<tr>
<td>Health</td>
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</tr>
<tr>
<td>Reactivity</td>
<td>0 Physical Hazard</td>
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</table>

Key / Legend:
- NFPA: 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

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