SAFETY DATA SHEET

1. Product and Company Identification

SAR Fluorescein Dye Marker

Identified Use: Emergency distress signal
Use Advised Against: none

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

2. Hazards Identification

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

GHS Label Elements

Pictograms

Signal Word Danger

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

Hazard Statements
P301/315 IF SWALLOWED: Get immediate medical advice / attention.
P302/352 IF ON SKIN: Wash with plenty of soap and water.
P304/340/342 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305/338/351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P305/335/351 If skin irritation or rash occurs, get medical advice/attention.

Hazard Statements 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
Engineering 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

Vapor Pressure: Not applicable

Odor: No data available

Flammability: No data available

Partition Coefficient: No data available

Auto Ignition Temperature: No data available

Melting Point: Not available

Freezing Point: Not applicable

Specific Gravity: Not applicable

Odor Threshold: No data available

Flammability Limits: No data available

Viscosity: No data available

Solubility: Not available

Evaporation Rate: Not applicable

Vapor Density: Not applicable

Flash Point: Not applicable

Relative Density: No data available

Decomposition Temperature: No data available

10. Stability and Reactivity

Chemical Stability
Stable

Reactivity: No information available

Possibility of Hazardous Reactions: Hazardous polymerization will not occur

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
### 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; LC50 freshwater fish 8250 - 9000 mg/L 96 h; EC50: freshwater algae 650 mg/L/120h; EC50: 2350 water flea mg/L/48h
- **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 - 48 h; EC50: Pseudokirchneriella subcapitata (algae) - 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
- No information found

#### 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>
<th>Packing Group</th>
<th>EX Number</th>
<th>Reportable Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
<td>Non-hazardous</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

#### Marine Pollutant:
No

##### Special precautions for user:
No information available

### 15. Regulatory Information

#### US Regulations
- **TSCA**: 8(b) 
- **CERCLA**: no 
- **CWA**: no 
- **CAA**: no 
- **SARA 313**: no 
- **SARA 302**: no 
- **Acute**: yes 
- **Chronic**: no 
- **Fire**: no 
- **Reactivity**: no 
- **Pressure**: no

#### Sodium Fluorescein

#### Sodium Bicarbonate

#### Adipic Acid

### 16. Other Information

#### Revision Information: June 2015

<table>
<thead>
<tr>
<th>NFPA Rating</th>
<th>HMIS Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>2</td>
</tr>
<tr>
<td>Health</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Key / Legend:
- **NFPA**: national fire protection association
- **CASA**: 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

#### Legal Statement
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