SAFETY DATA SHEET

1. Product and Company Identification

Fluorescein Dye Marker

Identified Use: Emergency distress signal Use Advised Against: none

Manufacturers Information Orion Safety Products

EMERGENCY CHEMTREC

2. Hazards Identification

GHS Classifications

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

GHS Label Elements

Pictograms

Hazard Statements

H318 Causes serious eye damage

H335 May cause respiratory irritation

Signal Word Danger

Precautionary Statements

P103 Keep out of reach of children

P370 In case of fire: use water deluge

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.

P333/313 If skin irritation or rash occurs, get medical advice/attention.

Hazards Not Otherwise Classified (HNOC): none

3. Composition / Information on Ingredients

Component	CAS #	EINCS #	%age
Sodium Fluorescein	518-47-8	208-253-0	>50%
Sodium Bicarbonate	144-55-8	205-633-8	<50%
Adipic Acid	124-04-9	204-673-3	<20%

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	OSHA PEL	ACGIH TLV
Sodium Fluorescein	Not Established	Not Established
Sodium Bicarbonate	Not Established	Not Established
Adipic Acid	None established	5 mg/m3

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

pH:	Not available	Melting Point:	Not available	Solubility:	Not available
Boiling Point / Range:	Not applicable	Freezing Point:	Not applicable	Evaporation Rate:	Not applicable
Vapor Pressure:	Not applicable	Specific Gravity	Not applicable	Vapor Density:	Not applicable
Odor:	No data available	Odor Threshold:	No data available	Flash Point:	Not available
Flammability:	No data available	Flammability Limits:	No data available	Relative Density:	No data available
Partition Coefficient:	No data available	Viscosity:	No data available		
Auto Ignition Temperature:	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

Toxicology	Oral LD50	skin LD50	LC50
Sodium Fluorescein	Rat - 6,721 mg/kg	not available	not available
Sodium Bicarbonate	Rat: 4220 mg/kg	not available	not available
Adipic Acid	Rat: 5,560 mg/kg	Rabbit: 7,940 mg/kg	Rat: 4 h - > 7.7 mg/l

Product toxicological information

Acute Toxicity	Not classified – *Acute Toxicity Estimate yields oral LD_{50} 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* 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 (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

	ID Number	shipping name	hazard class	packing group	EX Number	Reportable Quantities
Domestic & International	none	Non-hazardous	none	none	none	none

Marine Pollutant: no

Special precautions for user: No information available

15. Regulatory Information

US Regulations	TSCA	CERCLA	CWA	CAA	SARA 313	SARA 302	Acute	Chronic	Fire	Reactivity	Pressure
Sodium Fluorescein	8(b)	no	no	no	no	no	no	yes	no	no	no
Sodium Bicarbonate	yes	no	no	no	no	no	yes	yes	no	no	no
Adipic Acid	yes	yes	yes	no	no	no	yes	no	no	no	no

US States	Prop 65	NJ	PA	Canada	WHMIS	**DSL**	Europe	wgk
Sodium Fluorescein	no	yes	yes		D2B Toxic materials	yes		Not listed
Sodium Bicarbonate	no	no	no		D2B Toxic materials	yes		1
Adipic Acid	no	yes	yes		D2B Toxic materials	yes		1

16. Other Information

Revision Information: June 2015

NFPA Rating		HMIS Rating	
Flammability	2	Flammability	2
Health	1	Health	1
Reactivity	0	Physical Hazard	0

Key / Legend:

HMIS: hazardous material identification system
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

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