

SAFETY DATA SHEET

Preparation Date: 2/4/2016

Revision Date: 2/4/2016

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: FL113
Product Name: FLUORESCEIN, ALCOHOL SOLUBLE

Other means of identification

Synonyms:
 C.I. 45350:1
 C.I. 45350A
 C.I. 45350 (free acid)
 C.I. Solvent Yellow 94
 3',6'-Dihydroxyfluoran
 Dihydroxyfluorane
 3',6'-Dihydroxyspiro(isobenzofuran-1(3H),9'(9H)-xanthen)-3-one
 3,6-Dihydroxyspiro(xanthene-9,3'-phthalide)
 3,6-Fluorandiol
 Benzoic acid, o-(6-hydroxy-3-oxo-3H-xanthen-9-yl)-
 Benzoic acid, 2-(6-hydroxy-3-oxo-3H-xanthen-9-yl)-
 9-(o-Carboxyphenyl)-6-hydroxy-3-isoxanthenone
 9-(o-Carboxyphenyl)-6-hydroxy-3H-xanthen-3-one
 D+C Yellow No. 7
 Fluoran, 3',6'-dihydroxy-
 3',6'-Fluorandiol
 Fluorescein acid
 Hidacid fluorescein
 Japan Yellow 201
 Japan Yellow No. 201
 Resorcinolphthalein
 Soap Yellow F
 Solvent Yellow 94
 Spiro(isobenzofuran-1(3H),9'(9H)xanthen)-3-one, 3',6'-dihydroxy- (9CI)
 3H-Xanthen-3-one, 9-(o-carboxyphenyl)-6-hydroxy-
 Yellow fluorescein
 Zlut kyselá 73 (Czech)
 2321-07-5
 LM5075000
 45350:1

CAS #:

RTECS #

CI#:

Recommended use of the chemical and restrictions on use

Recommended use: Dyes.
Uses advised against: No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

1. IDENTIFICATION

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|-----------------------------------|-------------|
| Serious eye damage/eye irritation | Category 2A |
|-----------------------------------|-------------|

Label elements

Warning

Hazard statements

Causes serious eye irritation



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|--------------------------|-----------|----------|
| Fluorescein 2321-07-5 | 2321-07-5 | 100 |

4. FIRST AID MEASURES

First aid measures

General Advice: Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

4. FIRST AID MEASURES

| | |
|----------------------|---|
| Skin Contact: | Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. Consult a physician if necessary. |
| Eye Contact: | Flush eyes with water for 15 minutes. Get medical attention. |
| Inhalation: | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Ingestion: | Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary. |

Most important symptoms and effects, both acute and delayed

Symptoms Causes serious eye irritation. Ingestion may cause vomiting and nausea.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO₂). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon monoxide; carbon dioxide

Specific hazards: May be combustible at high temperatures

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. All equipment used when handling the product must be grounded.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Components | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|--------------------------|------|-------|-------|------------|
| Fluorescein 2321-07-5 | None | None | None | None |

Canada

| Components | Alberta | British Columbia | Ontario | Quebec |
|--------------------------|---------|------------------|---------|--------|
| Fluorescein 2321-07-5 | None | None | None | None |

Australia and Mexico

| Components | Australia | Mexico |
|------------|-----------|--------|
|------------|-----------|--------|

| | | |
|--------------------------|------|------|
| Fluorescein 2321-07-5 | None | None |
|--------------------------|------|------|

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles. or. Safety glasses with side-shields.
- Skin and body protection:** Chemical resistant apron. Gloves. Long sleeved clothing.
- Respiratory protection:** Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. .
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|--|--|
| Physical state: Solid. | Appearance: Powder. | Color: Yellowish-Red. Orange. Red brown. Red. Maroon. |
| Odor: Odorless. | Taste No information available | Formula: C20-H12-O5 |
| Molecular/Formula weight: 332.31 | Flammability: No information available | Flash point (°C): No data available |
| Flashpoint (°C/°F): No information available. | Flash Point Tested according to: Not available | Autoignition Temperature (°C/°F): No information available |
| Lower Explosion Limit (%): No information available | Upper Explosion Limit (%): No information available | pH: No information available |
| Melting point/range(°C/°F): 314-320 °C/597.2-608 °F | Boiling point/range(°C/°F): No information available | Decomposition temperature(°C/°F): 315 °C/599 °F |
| Bulk density: No information available | Density (g/cm3): No information available | Specific gravity: No information available |
| Vapor pressure @ 20°C (kPa): No information available | Evaporation rate: No information available | Vapor density: No information available |
| VOC content (g/L): No information available | Odor threshold (ppm): No information available | Partition coefficient (n-octanol/water): 3.35 |
| Viscosity: No information available | Miscibility: No information available | Solubility: Slightly soluble in Ethanol Slightly soluble in diethyl ether Very soluble in Acetone Soluble in pyridine Soluble in Methanol Insoluble in Benzene Insoluble in Chloroform Soluble in hot alcohol Soluble in Acetic acid Very slightly soluble in water Solubility in water: 50 mg/l @ 20 °C |

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents

Chemical stability

Stability:

Stable under recommended storage conditions

Possibility of Hazardous Reactions:

Hazardous polymerization does not occur

Conditions to avoid:

Heat. Avoid dust formation. Incompatible materials.

Incompatible Materials:

Oxidizing agents.

Hazardous decomposition products:

Carbon monoxide. Carbon dioxide.

Other Information

Corrosivity:

No information available

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Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Eyes. Ingestion. Inhalation.

Acute Toxicity

Component Information

Fluorescein - 2321-07-5

LD50/oral/rat = No information available

LD50/oral/mouse = 4738 mg/kg

LD50/dermal/rat = No information available

LD50/dermal/rabbit = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =

Value - Acute Tox Oral = 4738mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation.

Eye Contact: Causes serious eye irritation.

Inhalation May cause respiratory tract irritation.

Ingestion Ingestion may cause nausea, vomiting.

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Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity No information available

Sensitization: No information available

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic

| Components | IARC | ACGIH - Carcinogens | NTP | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|-------------|------------|---------------------|------------|------------------------|--|--|
| Fluorescein | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available

STOT - repeated exposure No information available

Target Organs: No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Components | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|-------------|------------------------|------------------------|------------------------|------------------------|
| Fluorescein | None | None | None | None |

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: None
ERG No: No information available
Marine Pollutant: No data available
DOT RQ (lbs): No information available

TDG (Canada)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available

ADR

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Classification Code: No information available
Description: No information available

14. TRANSPORT INFORMATION

ICAO

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available

IATA

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available

15. REGULATORY INFORMATION

International Inventories

| Components | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|--------------------|-----------|------------------|---------------------|--------------------------|---------|------------------|-------------------|
| <i>Fluorescein</i> | Present | Present KE-10869 | Present | Present (5)-671 (5)-3060 | Present | Present | Present 219-031-8 |

U.S. Regulations

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Components | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|--------------------|------------|------------------------|----------------------------|-------------------------------|
| <i>Fluorescein</i> | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Components | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting <i>de minimis</i> |
|--------------------|---|---|--|---------------------------------|---|
| <i>Fluorescein</i> | None | None | None | None | None |

U.S. TSCA

| Components | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|--------------------|---|--|
| <i>Fluorescein</i> | Not Applicable | Not Applicable |

Canada

WHMIS hazard class:

D2B Toxic materials

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

| Components | Canada (DSL) | Canada (NDSL) |
|-------------|--------------|---------------|
| Fluorescein | Present | Not Listed |

| Components | CEPA Schedule I - Toxic Substances | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
|-------------|------------------------------------|---|
| Fluorescein | Not listed | Not listed |

EU Classification**R-phrase(s)**

R36 - Irritating to eyes.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

| Components | Classification | Concentration Limits: | Safety Phrases |
|-------------|----------------|-----------------------|----------------|
| Fluorescein | | No information | |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant.

Xi

**16. OTHER INFORMATION**

16. OTHER INFORMATION

Preparation Date: 2/4/2016
Revision Date: 2/4/2016
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet