SAFETY DATA SHEET

Section 1 – Identification

Product Name CFSE
Catalog No. 422701
Recommended Use Research use only.
Company BioLegend
Street Address 9727 Pacific Heights Blvd
City, State, Zip, Country San Diego, CA 92121 US
Phone +1-858-455-9588
Emergency Number In case of a chemical emergency, spill, fire, or exposure, +1-858-455-9588 (7:00AM – 5:00PM PDT, M-F)

Principal demands according to Art. 32 REACH
Registration number(s) --
Authorization none
Restrictions none

Section 2 – Hazards Identification

2.1 Hazard Classification
Not classified

2.2 GHS Label elements, including precautionary statements
Pictogram None
Signal Word None
Hazard Statement None
Precautionary Statement None

Section 3 – Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>EINECS</th>
<th>EU Index</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-(and 6)-Carboxyfluorescein diacetate succinimidyl ester</td>
<td>150347-59-4</td>
<td>--</td>
<td>--</td>
<td>&gt;98%</td>
</tr>
</tbody>
</table>
Section 4 – First Aid Measures

4.1 Description of first aid measures

**General information:** Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.

**After inhalation:** Move to fresh air. If breathing is difficult/has stopped, give artificial respiration using respiratory protection. Do not use mouth-to-mouth method of resuscitation. Seek medical attention.

**After skin contact:** Immediately remove contaminated clothes, and wash with soap and copious amounts of water. Seek immediate medical attention.

**After eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the eye lids to ensure thorough rinsing. Seek medical attention.

**After swallowing:** Wash mouth out with water if person is conscious. DO NOT induce vomiting. Drink copious amounts of water, milk, or milk magnesia if conscious. Seek medical attention.

**Symptoms:** Contact may cause skin irritation. Contact may cause eye irritation.

Section 5 – Fire-Fighting Measures

5.1 Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards caused by the material, its products of combustion or resulting gases: During heating or in case of fire, poisonous gases may be produced.

5.3 Special protective equipment and precautions for fire-fighters: Wear protective clothing and self-contained breathing apparatus.

**Hazardous combustion materials:** Carbon oxides, nitrogen oxides.

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures: Not required.

6.2 Environment precautions: Prevent entry into waterways, drains, soil, and sewers. Use suitable absorbent material.

6.3 Measures for cleaning/collecting: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Do not allow to enter any water system.

6.4 Additional information:

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Section 7 – Handling and Storage

7.1 Information for safe handling: No special measures required.
7.2 Conditions for safe storage, including any incompatibilities: Keep container tightly closed and store in a well ventilated area.

Section 8 – Exposure controls/personal protection

8.1 Exposure Limits
N/A

8.2 Exposure Controls

Engineering Controls
Use only with adequate (local exhaust) ventilation or fume hood.

Personal protective equipment

General protective and hygienic measures
Keep away from foodstuffs, beverages, and feed.
Wash hands, face, and exposed forearms/areas after handling.
Wash contaminated clothing before reusing.
Ensure eyewash stations and safety showers are in close proximity to workstation.
Breathing equipment: No required.
Protection of hands: Chemical resistant gloves.
Eye protection: Safety goggles.
Body protection: Protective work clothing (lab coat).

Section 9 – Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Lyophilized, Off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No Data Available</td>
</tr>
<tr>
<td>pH</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>
Section 10 – Stability and Reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Nitrogen Oxides (NOx), Carbon oxides

10.5 Additional information
N/A

Section 11 – Toxicological Information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Routes of Entry</th>
<th>Ingestion, inhalation, skin and eye contact.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Contact may cause skin irritation</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Contact may cause eye irritation</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Section 12 – Ecological Information

| Environmental Toxicity         | No Data Available                           |
| Aquatic Toxicity               | No Data Available                           |
| Persistence and degradability  | No Data Available                           |
| Bioaccumulative potential      | No Data Available                           |
| Mobility in soil               | Water soluble                               |
| Results of PBT and vPvT assessment | No data available                         |
Section 13 – Disposal Considerations

Minimize waste as much as possible.
Disposal must be made according to state and federal regulations.

Section 14 – Transport Information

DOT (Ground)
Not regulated

IMDG
Not regulated

IATA
Not regulated

ADR
Not regulated

ADN
Not regulated

RID
Not regulated

Section 15 – Regulatory Information

15.1 Product related hazard information: The product has been classified and marked in accordance with regulations on hazardous materials.

Section 16 – Other information

Revision Date: December 11th, 2013

To the best of our knowledge, the information contained herein is accurate. However, neither BioLegend, nor any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Department issuing MSDS: Safety & Environment Department
Contact: Technical Service Representative