

Safety Data Sheet

Fluorescein Sodium Salt

Section 1: Identification

Product identifier	Fluorescein Sodium Salt
Synonyms	Sodium fluorescein; Fluorescein disodium salt; Acid Yellow 73; Uranine; C.I. 45350
CAS number	518-47-8
Chemical formula	C ₂₀ H ₁₀ Na ₂ O ₅
Molecular weight	376.28 g/mol
Physical form	Powder
Recommended use	Water-soluble fluorescent dye/colorant and tracer for appropriate commercial, industrial, technical, laboratory, educational, leak-detection, water-tracing, analytical and related applications.
Use restrictions	Not intended or represented for food or drug/pharmaceutical applications.
Supplier / Distributor	Chemical Store Inc.
Address	1059 Main Avenue, Clifton, NJ 07011, United States
Telephone / Website / Email	+1 (973) 405-6248 ChemicalStore.com info@ChemicalStore.com
Emergency telephone	+1 (973) 420-4972 (United States)

Section 2: Hazards Identification

United States (US) - OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA HCS classification	Not classified as a hazardous substance or mixture under the current U.S. supplier SDSs used as the principal classification basis.
Signal word	None required.
Hazard pictograms	None required.
Hazard statements	None required.
Hazards not otherwise classified	No specific HNOI identified in the principal current U.S. supplier SDSs reviewed. As with other fine organic powders, avoid generating or breathing airborne dust and avoid unnecessary eye contact.
Classification note	Some commercial marketplace grades list irritation or acute-toxicity classifications. Because classifications can vary with purity, impurities, additives, and supplier data, the actual Chemical Store grade should be checked against its current supplier specification/COA before commercial release.

Recommended precautionary practices

- Avoid generating and breathing dust.
- Use adequate ventilation where powder is handled.
- Wear safety glasses and suitable work gloves.

- Wash hands and exposed skin after handling.
- Keep containers tightly closed when not in use.

Section 3: Composition / Information on Ingredients

Chemical Name	CAS Number	% by Weight	Classification / Comments
Fluorescein sodium salt / Fluorescein disodium salt	518-47-8	Product-specific assay not provided; verify COA/specification	Principal current U.S. supplier SDSs reviewed classify the substance as not hazardous under OSHA HCS. Exact purity/additives must be verified for the sold grade.

Note: This SDS assumes fluorescein sodium salt is the principal ingredient and that no hazardous impurities or additives materially alter the classification.

Section 4: First Aid Measures

Inhalation	Move person to fresh air. Keep comfortable for breathing. If coughing, irritation, breathing difficulty, or other symptoms persist, obtain medical attention.
Skin contact	Wash with soap and plenty of water. Remove contaminated clothing. Obtain medical advice if irritation develops or persists.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. Do not induce vomiting unless directed by medical personnel. Obtain medical advice if a significant quantity is swallowed or symptoms occur.
Most important symptoms/effects	No specific acute hazard is classified in the principal supplier SDSs reviewed. Dust may cause transient mechanical irritation of the eyes, nose, throat, or skin.
Notes to physician	Treat symptomatically and according to the circumstances of exposure.

Section 5: Fire Fighting Measures

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide as appropriate for the surrounding fire and packaging.
Specific hazards	Organic dye solid may burn under fire conditions. One commercial grade reports a closed-cup flash point of approximately 217.6 °C (423.7 °F) and storage class 11 (combustible solids).
Hazardous combustion products	Carbon oxides, sodium-containing residues, and irritating fumes may be generated during combustion or severe thermal decomposition.

Firefighter protection	Wear appropriate protective equipment and positive-pressure self-contained breathing apparatus when required by fire conditions.
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Section 6: Accidental Release Measures

Personal precautions	Avoid generating or breathing dust and avoid unnecessary eye/skin contact. Keep unnecessary personnel away. Provide adequate ventilation and wear appropriate PPE.
Environmental precautions	Prevent large uncontrolled releases to drains, sewers, soil, and waterways. Strong coloration/fluorescence may be visible at very low concentrations.
Containment / cleanup	Avoid raising dust. Carefully sweep, scoop, or vacuum with suitable filtered equipment and place in a closed container for reuse or disposal. Clean residual material with water where appropriate, while controlling colored wastewater.

Section 7: Handling and Storage

Handling	Avoid generating and breathing dust. Avoid unnecessary eye contact. Provide adequate ventilation. Wash thoroughly after handling. Keep away from unnecessary heat and ignition sources.
Storage	Keep container tightly closed in a cool, dry, well-ventilated place. Protect from contamination and prolonged exposure to light. Commercial supplier information supports room-temperature storage for dry powder.
Incompatible materials	Strong oxidizing agents should be avoided as a general precaution for an organic dye unless product-specific compatibility data establish otherwise.
Specific end use	Water-soluble fluorescent dye/colorant and tracer for non-food, non-drug applications.

Section 8: Exposure Controls / Personal Protection

No substance-specific OSHA PEL or NIOSH REL was identified in the principal sources reviewed for fluorescein sodium salt. Control airborne dust using good industrial hygiene practice and applicable workplace particulate limits.

Engineering controls	Use adequate general ventilation and local exhaust where dust may be generated.
Eye / face protection	Safety glasses with side shields; use dust goggles where significant airborne powder exposure is possible.
Skin protection	Protective gloves and work clothing suitable for the task. The dye may strongly stain skin, clothing, equipment, and work surfaces.
Respiratory protection	Where ventilation is inadequate or significant dust is generated, use an appropriate NIOSH-approved particulate respirator under a respiratory protection program meeting 29 CFR 1910.134.

Hygiene measures	Wash hands and exposed skin after handling and before eating, drinking, or smoking. Remove contaminated clothing before leaving the work area.
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Section 9: Physical and Chemical Properties

Property	Value	Property	Value
Physical state	Solid powder	Appearance / color	Typically orange-red to red/orange powder; exact shade is grade-dependent
Odor	No characteristic odor identified	Molecular formula	C20H10Na2O5
Molecular weight	376.28 g/mol	Melting point	>300 °C reported for a commercial tracer grade
Water solubility	Water soluble; one commercial tracer grade reports 1 mg/mL, while other technical references report substantially higher solubility depending on grade and conditions	pH	Approx. 8.3 at 20 °C for a 10 g/L solution (commercial tracer-grade data)
Density	Approx. 0.78 g/cm ³ at 29.6 °C reported for one commercial grade	Fluorescence	Strong yellow-green/green fluorescence; commercial data report excitation around 460-490 nm and emission around 514-515 nm depending on conditions
Flash point	Approx. 217.6 °C (423.7 °F), closed cup, reported for one commercial grade	Flammability	Combustible organic solid; not classified as a flammable solid in the principal OSHA supplier SDSs reviewed
Vapor pressure	Not applicable / negligible for solid	Vapor density	Not applicable
Odor threshold	Not determined	Partition coefficient	Not determined
Autoignition temperature	Not determined	Explosive properties	Not classified as explosive; minimize fine airborne dust

Section 10: Stability and Reactivity

Reactivity	No dangerous reaction is expected under normal conditions of use.
Chemical stability	Stable under recommended dry storage conditions.
Possibility of hazardous reactions	Hazardous polymerization is not expected.
Conditions to avoid	Excessive heat, ignition sources, prolonged light exposure, moisture contamination where product quality is important, and unnecessary dust generation.
Incompatible materials	Strong oxidizing agents; verify compatibility for process-specific chemicals.
Hazardous decomposition products	Carbon oxides, sodium-containing residues, and irritating organic fumes may form during combustion or severe thermal decomposition.

Section 11: Toxicological Information

Likely routes of exposure	Inhalation of dust, eye contact, skin contact, and incidental ingestion.
Acute toxicity	The principal current U.S. supplier SDSs reviewed do not classify fluorescein sodium salt as acutely toxic. Some marketplace grades carry different classifications; product-specific purity and supplier data should therefore be verified.
Skin corrosion / irritation	Not classified in the principal supplier SDSs reviewed. Powder may cause mechanical irritation or staining.
Serious eye damage / irritation	Not classified in the principal current U.S. supplier SDSs used as the classification basis, although direct dust contact should be avoided.
Respiratory / skin sensitization	Not classified based on the principal supplier information reviewed.
Germ cell mutagenicity	Not classified based on the principal supplier information reviewed.
Carcinogenicity	No carcinogenic classification was identified in the principal current U.S. supplier SDSs reviewed.
Reproductive toxicity	Not classified based on the principal supplier information reviewed.
STOT - single / repeated exposure	Not classified based on the principal supplier information reviewed.
Aspiration hazard	Not applicable to a solid powder.

Section 12: Ecological Information

Ecotoxicity	Product-specific aquatic toxicity data were not sufficient in the principal sources used here to assign a U.S. environmental hazard classification.
Persistence / degradability	No adequate product-specific data identified for this SDS.
Bioaccumulative potential	No adequate product-specific data identified for this SDS.
Mobility in soil	High water solubility can increase mobility in aqueous environments; actual environmental behavior depends on pH, concentration, adsorption, and local conditions.
Other adverse effects	Avoid uncontrolled release. The dye is highly visible/fluorescent at low concentrations and may cause significant coloration even where toxicological significance is low.

Section 13: Disposal Considerations

Product waste	Dispose of unused product and contaminated cleanup material in accordance with applicable federal, state, and local regulations. Do not discharge concentrated dye to drains or waterways.
Packaging waste	Empty containers may retain colored powder/residue. Clean appropriately before recycling or disposal. Do not reuse contaminated packaging for food or pharmaceutical purposes.

Section 14: Transport Information

Mode	UN Number	Proper Shipping Name	Hazard Class	Packing Group
U.S. DOT	Not regulated as dangerous goods based on current principal supplier SDSs reviewed	Not applicable	Not applicable	Not applicable
TDG	Not regulated based on principal supplier information reviewed	Not applicable	Not applicable	Not applicable
IMDG	Not regulated based on principal supplier information reviewed	Not applicable	Not applicable	Not applicable
IATA/ICAO	Not regulated based on principal supplier information reviewed	Not applicable	Not applicable	Not applicable

Protect packages from damage, moisture, contamination, and unnecessary heat during transport.

Section 15: Regulatory Information

OSHA Hazard Communication	Principal current U.S. supplier SDSs reviewed classify fluorescein sodium salt, CAS 518-47-8, as not hazardous under OSHA HCS.
TSCA	Supplier regulatory status can vary by product and intended use. One Sigma analytical-standard SDS states that its specific product is supplied under the TSCA R&D exemption; this should not be generalized to Chemical Store's commercial grade. Verify the TSCA status of the actual source material before commercial distribution.
SARA / CERCLA	Determine reporting obligations from the actual product composition, impurities, facility inventory, and applicable federal/state requirements.
State / local requirements	Users must determine the applicability of state and local requirements for the specific grade, quantity, workplace, and use.
Use restriction	This Chemical Store SDS is intended for non-food and non-drug/pharmaceutical applications.

Section 16: Other Information

Revision date	2026-10-02
Initial preparation date	2026-10-02
SDS version	1.0
Supersedes	No previous version

Version	Date	Description
1.0	2026-10-02	Initial SDS creation for Fluorescein Sodium Salt, CAS 518-47-8, water-soluble fluorescent dye for non-food and non-drug applications.

Key literature and data sources

- Sigma-Aldrich Safety Data Sheet, Fluorescein sodium salt, CAS 518-47-8, Version 6.5, revision 2024-09-07.
- Thermo Fisher Scientific Chemicals / Alfa Aesar Safety Data Sheet, Fluorescein disodium salt, CAS 518-47-8, revision 2025-12-21, prepared to U.S. OSHA HCS 2024.
- Sigma-Aldrich product information for Fluorescein sodium salt F6377, including water solubility, pH, melting point, density, fluorescence, flash point, storage class, and room-temperature storage.
- PubChem / ChemIDplus identity records for Fluorescein sodium, CAS 518-47-8.
- Chemical Store product description supplied for this SDS: Fluorescein Sodium Salt, CAS 518-47-8, water-soluble fluorescent dye.

Hazard classification method

Literature review and current U.S. supplier-SDS review. The OSHA classification follows the principal current supplier SDSs for CAS 518-47-8, which classify the substance as not hazardous. Because some commercial grades report different hazard classifications, the actual Chemical Store supplier specification, COA, purity, additives, and impurity profile should be reviewed before commercial release.

Training advice

- Chemical hazard communication and SDS use.
- Safe powder handling and dust-control practices.
- Use of eye protection, gloves, and respiratory protection where required.
- Spill response and control of highly colored wastewater.
- Proper storage and waste handling.

Disclaimer

The information provided in this Safety Data Sheet is believed to be accurate and represents the best information currently available from the sources identified above and the product information supplied by Chemical Store. However, no warranty, express or implied, is made regarding its accuracy, completeness, or suitability for any particular purpose. The user is responsible for confirming the actual commercial grade, purity, additives, impurities, workplace conditions, intended use, and regulatory status, and for compliance with all applicable laws and regulations.

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