



MATERIAL SAFETY DATA SHEET

Section 1 – PRODUCT AND SAFETY SUPPLIER INFORMATION

Product Name: DFO Solution
Common Name: 1,8-Diazafluoren-9-one Solution
Supplier: Lightning Powder Company, Inc.
13386 International Parkway, Jacksonville, FL 32218
Emergency Telephone: United States - Chemtel 800-255-3924 International 813-248-0585 (Call
Date Prepared: July 15, 2003

Section 2 – HAZARDOUS INGREDIENTS

Ingredient	CAS#	Percent	PEL (OSHA)	TLV (ACGIH)
Trade Secret as defined by OSHA 29 CFR 1910.1200 Appendix D		93.5	50 ppm*	50 ppm
Trade Secret as defined by OSHA 29 CFR 1910.1200 Appendix D		6	Undetermined	
		Undetermined		

Section 3 – PHYSICAL/CHEMICAL PROPERTIES

Appearance and Odor: Clear, pale liquid with chloroform-like odor.
Specific Gravity: 1.4352 Solubility in Water: 0.16785 %
Boiling Point: 86.7 deg. C Melting Point: -86.4 deg. C
Vapor Density: 4.54 Vapor Pressure (mmHg): 57.8 @ 20 deg. C
Evaporation Rate: 0.28 (ethyl ether = 1) Percent Volatile:
93.5

Section 4 – FIRE AND EXPLOSION DATA

Flash Point: None (DOT) UEL: 52 % LEL: 7.8 %
Extinguishing Media: CO2, dry chemical, water.
Firefighting Procedures: Nonflammable liquid, but vapor concentrations ranging
between explosion limits can occur in confined or poorly ventilated areas. Wear
SCBA with NIOSH approved pressure demand. Emits toxic fumes under fire
conditions.
Fire and Explosion Hazards: None known.



Section 5 – REACTIVITY DATA

Stability: Yes Hazardous Polymerization: No
Incompatibilities: Intense sources of combustion, strong oxidizing agents,
~~Hazardous~~ Decomposition Products: Thermal decomposition can yield hydrogen chloride and possible traces of phosgene.

Section 6 – HEALTH HAZARD INFORMATION

Health Hazards: Can be absorbed through skin with mild irritation and purple discoloration. Splash contact may be moderately irritating to eyes.
Routes of Entry and First-Aid Procedures:
Eyes: Flush with plenty of water.
Inhalation: Move person to fresh air. Give oxygen if breathing is difficult. Give AR if not breathing.
Skin: Flush with plenty of soap and water.
Ingestion: Give 3-4 glasses of water if person is alert. Do not induce vomiting. Seek medical attention.
Signs and Symptoms of Exposure: Overexposure may cause injury or be fatal if swallowed, may cause irritation or dermatitis of skin, may cause irritation of or pain to eyes, may cause dizziness, CNS depression, headache, drowsiness, visual disturbances, if inhaled in high concentrations.
Medical Conditions Aggravated by Exposure: Liver and kidney diseases.

Section 7 – EXPOSURE CONTROLS

Respirator Protection: NIOSH approved vapor respirator if concentrations exceed exposure limits.
Ventilation: *Note- The currently enforceable 1971 limit is 100 ppm TWA and 200 ppm ceiling. Use local exhaust ventilation as needed to maintain concentrations below exposure limits.
Protective Gloves: Chemical-resistant rubber. Eye Protection: Splash goggles.
Other Protective Equipment: Impervious clothing to prevent skin contact.
Work and Hygienic Practices: Wash thoroughly after handling and use.

Section 8 – SPILL OR LEAK PROCEDURES

Steps to be taken if material is spilled or released: Provide maximum ventilation. Wear personal protection. Recover spill with inert absorbent. Prevent material from entering drains, sewers, and waterways. Store in closed containers.
Waste Disposal Method: In accordance with all applicable EPA regulations.
Classified as U228 hazardous waste and must be disposed of accordingly under RCRA.



Section 9 – PRECAUTIONS FOR SAFE HANDLING AND USE

Special Precautions: Avoid contact with foodstuffs. Wear personal protection. Wash thoroughly.

Storage Method: Keep tightly sealed in a cool location away from direct sunlight. Do not transfer material to aluminum containers or enclosures.

Section 10 – TOXICOLOGICAL DATA

Carcinogenicity: This product contains a material reasonably anticipated to be a human carcinogen.

NPT: No

OSHA: No

IARC: Yes, 2A

Acute Inhalation LC50: 8450 ppm (mouse, 4 hours).

Acute Dermal LD50: >20 mg/kg (rabbit).

Acute Oral LD50: 5650 mg/kg (rat).

Section 11 – ECOLOGICAL DATA

Sheepshead Minnows- 96-hour LC50- 52 mg/l

Mysid Shrimp- 96-hour LC50- 14 mg/l

Marine Alga- 96-hour EC50- 95 mg/l

Section 12 – TRANSPORTATION IDENTIFICATION

Proper Shipping Name: Consumer Commodity, ORM-D

Identification Number: n/a

Hazard Class: n/a

Packing Group: n/a