



**SIGMA-ALDRICH**

## Material Safety Data Sheet

Date Printed: 03/10/2006  
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Version 1.20

### Section 1 - Product and Company Information

**Product Name** FLUOROPROFILETM KIT  
**Product Number** FP0010  
**Brand** Sigma Chemical

**Company** Sigma-Aldrich  
**Street Address** 3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 800-325-5832  
**Fax:** 800-325-5052

**Emergency Phone:** 314-776-6555

### Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
FLUOROPROFILETM FLUORESCENT REAGENT	None	Yes		
<b>Ingredient Name</b>	<b>CAS #</b>	<b>Percent</b>	<b>SARA 313</b>	
DIMETHYL SULFOXIDE	67-68-5	80.000 %	No	
ACETONITRILE	75-05-8	20.000 %	Yes	

**Formula**  
**Synonyms**

### Section 3 - Hazards Identification

**Emergency Overview**  
Toxic.  
Harmful by inhalation and if swallowed. Toxic in contact with skin. Irritating to respiratory system and skin. Risk of serious damage to eyes.  
Target organ(s): Liver, Central nervous system.

**HMIS Rating**  
Health: 2\*      Flammability: 2      Reactivity: 0

**NFPA Rating**  
Health: 2      Flammability: 2      Reactivity: 0

\*additional chronic hazards present.

### Section 4 - First Aid Measures

**Oral Exposure**  
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**Inhalation Exposure**  
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

#### Dermal Exposure

In case of contact, immediately wash skin with soap and copious amounts of water.

#### Eye Exposure

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

### Section 5 - Fire Fighting Measures

**Flash Point:** 142 - 200 °F 61.1 - 93.3 °C

**Autoignition Temp:** 214.9 °C

#### Extinguishing Media

##### Suitable

Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

#### Firefighting

##### Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

##### Specific Hazard(s)

Combustible liquid. Emits toxic fumes under fire conditions.

### Section 6 - Accidental Release Measures

#### Procedure to be Followed in Case of Leak or Spill

Evacuate area.

#### Methods for Cleaning Up

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

#### Environmental Precaution(s)

Avoid contaminating sewers and waterways with this material.

### Section 7 - Handling and Storage

#### Handling

##### User Exposure

Do not breathe vapor. Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. Dimethyl sulfoxide is readily absorbed through skin and may carry such materials into the body. Avoid prolonged or repeated exposure.

#### Storage

##### Suitable

Store under inert gas. Keep tightly closed. Keep away from heat and open flame. Store at 2-8°C

#### Special Requirements

Store under inert gas. Hygroscopic.

### Section 8 - Exposure Controls / PPE

#### Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

#### Personal Protective Equipment

##### Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

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Safety and Environmental

**Hand**  
Compatible chemical-resistant gloves.  
**Eye**  
Chemical safety goggles.  
**Skin-Specific**  
Chemical resistant apron.

#### General Hygiene Measures

Wash contaminated clothing before reuse. Wash thoroughly after handling.

#### Exposure Limits

Country	Type	Value
Poland	NDS	70 MG/M3
<b>Remarks:</b> ACETONITRILE		
Poland	NDSCh	140 MG/M3
<b>Remarks:</b> ACETONITRILE		
Poland	NDSP	
<b>Remarks:</b> ACETONITRILE		
<b>Remarks:</b> ACETONITRILE ACGIH	TWA	20 ppm
<b>Remarks:</b> ACETONITRILE ACGIH	TLV	
<b>Remarks:</b> Not classifiable as a human carcinogen. ACETONITRILE ACGIH	TLV STEL	60 ppm
<b>Remarks:</b> ACETONITRILE ACGIH	TLV TWA	20 ppm
<b>Remarks:</b> Skin ACETONITRILE NIOSH	TWA	20 ppm10H, air
<b>Remarks:</b> ACETONITRILE OSHA	PEL	70 mg/m3 40 ppm8H TWA
<b>Remarks:</b> CONSTRUCT. ACETONITRILE OSHA	PEL	70 mg/m3 40 ppm8H TWA
<b>Remarks:</b> FED. CONT. ACETONITRILE OSHA	PEL	70 mg/m3 40 ppm8H TWA
<b>Remarks:</b> GEN. INDU. ACETONITRILE OSHA	PEL	70 mg/m3 40 ppm8H TWA
<b>Remarks:</b> SHIPYARD ACETONITRILE		

#### Section 9 - Physical/Chemical Properties

<b>Appearance</b>	
<b>Physical State</b>	<b>Color</b>
Liquid	Dark - purple
<b>Molecular Weight:</b>	N/A
<b>pH</b>	N/A
<b>BP/BP Range</b>	81.7 °C
<b>MP/MP Range</b>	-10 °C
<b>Freezing Point</b>	N/A
<b>Vapor Pressure</b>	72.8 mmHg 20 °C
<b>Vapor Density</b>	2.71 g/l
<b>Saturated Vapor Conc.</b>	N/A
<b>SG/Density</b>	0.98 g/cm3
<b>Bulk Density</b>	N/A
<b>Odor Threshold</b>	40 ppm
<b>Volatile%</b>	N/A
<b>VOC Content</b>	N/A

**Water Content** N/A  
**Solvent Content** N/A  
**Evaporation Rate** N/A  
**Viscosity** N/A  
**Partition Coefficient** N/A  
**Decomposition Temp.** N/A  
**Flash Point °F** 142 - 200 °F  
**Flash Point °C** 61.1 - 93.3 °C

**Explosion Limits** N/A

**Flammability** N/A  
**Autoignition Temp** 214.9 °C

**Solubility**  
**Solubility in Water:** Soluble.  
**Solvent:** Acetone  
**Other Solvents:** DIETHYL ETHER.

N/A = not available

#### Section 10 - Stability and Reactivity

##### Stability

Stable

Stable.

##### Conditions to Avoid

Exposure to moisture may affect product quality.

##### Materials to Avoid

Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents.

##### Hazardous Decomposition Products

##### Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide, Sulfur oxides.

##### Hazardous Exothermic Reactions

##### Hazardous Exothermic Reactions

Methyl sulfoxide (DMSO) undergoes a violent exothermic reaction on mixing with copper wool and trichloroacetic acid. On mixing with potassium permanganate it will flash instantaneously. It reacts violently with: acid halides, cyanuric chloride, silicon tetrachloride, phosphorus trichloride and trioxide, thionyl chloride, magnesium perchlorate, silver fluoride, methyl bromide, iodine pentafluoride, nitrogen periodate, diborane, sodium hydride, and perchloric and periodic acids. When heated above its boiling point methyl sulfoxide degrades giving off formaldehyde, methyl mercaptan, and sulfur dioxide.

##### Hazardous Polymerization

##### Hazardous Polymerization

Will not occur.

#### Section 11 - Toxicological Information

##### Route of Exposure

##### Skin Contact

May cause skin irritation.

##### Skin Absorption

May be harmful if absorbed through the skin. Readily absorbed through skin.

##### Eye Contact

Causes eye irritation.

##### Inhalation

Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

**Ingestion**

May be harmful if swallowed.

**Target Organ(s) or System(s)**

Eyes, Skin, Blood, Lungs, Liver, Kidneys, Central nervous system.

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Conditions Aggravated by Exposure**

Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. Dimethyl sulfoxide is readily absorbed through skin and may carry such materials into the body.

Acetonitrile is metabolized in the liver to water, formic acid, and hydrogen cyanide. The cyanide is further metabolized to thiocyanate.

RTECS Number: N/A

**Chronic Exposure - Carcinogen**

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

**Section 12 - Ecological Information**

No data available.

**Section 13 - Disposal Considerations****Appropriate Method of Disposal of Substance or Preparation**

Contact a licensed professional waste disposal service to dispose of this material.

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.

Observe all federal, state, and local environmental regulations.

**Section 14 - Transport Information****DOT**

**Proper Shipping Name:** Combustible liquid, n.o.s.

**UN#:** NA1993

**Class:** COMBUSTIBLE LIQUID

**Packing Group:** Packing Group III

**Hazard Label:** None

**PIH:** Not PIH

**IATA**

**Non-Hazardous for Air Transport:** Non-hazardous for air transport.

**Section 15 - Regulatory Information****EU Additional Classification**

**Symbol of Danger:** Xi

**Indication of Danger**

Irritant.

**Risk Statements** R: 36

Irritating to eyes.

**Safety Statements** S: 26

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

**US Classification and Label Text**

**Indication of Danger**

Toxic.

**Risk Statements**

Harmful by Inhalation and if swallowed. Toxic in contact with skin. Irritating to respiratory system and skin. Risk of serious damage to eyes.

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**Safety Statements**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**US Statements**

Target organ(s): Liver, Central nervous system.

**United States Regulatory Information**

**SARA Listed:** Yes

**Notes:** This product is or contains a component that is subject to SARA313 reporting requirements.

**Canada Regulatory Information****WHMIS Classification**

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

**DSL:** Yes

**NDSL:** No

**Section 16 - Other Information****Disclaimer**

For R&D use only. Not for drug, household or other uses.

**Warranty**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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