**Section 1 - Product and Company Information**

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<th>Product Name</th>
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<tbody>
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<td>Product Number</td>
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</tr>
<tr>
<td>Brand</td>
<td>Fluka Chemical</td>
</tr>
<tr>
<td>Company</td>
<td>Sigma-Aldrich</td>
</tr>
<tr>
<td>Street Address</td>
<td>3000 Spruce Street</td>
</tr>
<tr>
<td>City, State, Zip, Country</td>
<td>SAINT LOUIS, MO 63103 US</td>
</tr>
<tr>
<td>Technical Phone</td>
<td>800-325-6552</td>
</tr>
<tr>
<td>Fax</td>
<td>900-203-5565</td>
</tr>
<tr>
<td>Emergency Phone</td>
<td>314-776-8535</td>
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**Section 2 - Composition/Information on Ingredient**

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<tr>
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**Section 3 - Hazards Identification**

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<th>Reactivity</th>
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<td>NFPA Rating</td>
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<tr>
<td>Health 0</td>
<td>0</td>
<td>1</td>
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</tbody>
</table>

For additional information on toxicity, please refer to Section 11.

**Section 4 - First Aid Measures**

- **Oral Exposure**: If swallowed, wash mouth with water. Provided person is conscious. Call a physician.
- **Inhalation Exposure**: If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- **Dermal Exposure**: In case of contact, immediately wash skin with soap and copious amounts of water.
- **Eye Exposure**: In case of contact with eyes, flush with copious amount of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Section 5 - Fire Fighting Measures**

- **Flash Point**: 608 °F
- **Autoignition Temp**: N/A
- **Extinguishing Media**: Suitable for use: 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): Emit toxic fumes under fire conditions.

**Section 6 - Accidental Release Measures**

- **Methods for Cleaning Up**: Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

**Section 7 - Handling and Storage**

- **Handling**: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
- **Storage**: Suitable. Keep tightly closed. Store under argon.
- **Special Requirements**: Air and light sensitive. Store under inert gas.

**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). Respiratory protection is not required. Where protection is desired, use multipurpose combination (US) or type ABEX (EN 14387) respirator cartridges.
  - Hand: Protective gloves.
  - Eye: Chemical safety goggles.

**Section 9 - Physical/Chemical Properties**

- **Appearance**: Clear viscous liquid
- **Color**: Colorless

Sigma-Aldrich Corporation

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Fluka Chemical - 92662
www.sigma-aldrich.com
**Molecular Weight**

885.46 AMU

**Property**

<table>
<thead>
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N/A = not available

**Section 10 - Stability and Reactivity**

**Stability**

Stable

Conditions of Instability

Air and light sensitive.

Conditions to Avoid

Heat.

Materials to Avoid

Strong oxidizing agents

**Hazardous Decomposition Products**

Hazardous Decomposition Products

Carbon monoxide, Carbon 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.

Eye Contact

May cause eye irritation.

**Inhalation**

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

**Ingestion**

May be harmful if swallowed.

**Signs and Symptoms of Exposure**

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

**RTECS Number**

N/A

**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. Dispose of or mix the material with a combustible solvent and burn in a chemical incinerator equipped with a scrubber and scrubber. Observe all federal, state, and local environmental regulations.

**Section 14 - Transport Information**

**DOT**

**Proper Shipping Name:** None

**Non-Hazardous for Transport** This substance is considered to be nonhazardous for transport.

**IATA**

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

**Section 15 - Regulatory Information**

**United States Regulatory Information**

SARA Listed: No

**Canada Regulatory Information**

WHMIS Classification

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

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 mailing slip for additional terms and conditions of sale. Copyright©2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.
Section 1 - Product and Company Information

Product Name: Methyl oleate
Product Number: 04754
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3000 Spruce Street
City, State, Zip. Country: SAINT LOUIS, MO 63103 US
Telephone: 600-325-5832
Fax: 600-325-5656
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex I Index Number</th>
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<tr>
<td>METHYL OLEATE</td>
<td>112-92-9</td>
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<td>203-992-5</td>
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Formula: C19H36O2
Synonyms: Emerex 2201, Emery oleic acid ester 2301, Methyl oleate, Methyl oleate, NSO 406282, I288-Octadecenoic acid, methyl ester

Section 3 - Hazards Identification

Emergency Overview
- Caution: Avoid contact and inhalation.

HIMS Rating
- Health: 1
- Flammability: 0
- Reactivity: 1

NFPA Rating
- Health: 1
- Flammability: 0
- Reactivity: 1

For additional information on toxicity, please refer to Section 11.

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 breathing becomes difficult, call a physician.

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

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Flash Point: 235 °F (113 °C)
Autoignition Temp: N/A

Extinguishing Media
- Suitable: Water spray
- Dry chemical powder

Firefighting Equipment
- Self-contained breathing apparatus
- Protective clothing to prevent contact with skin and eyes
- Gas masks under fire conditions

Section 6 - Accidental Release Measures

Methods for Cleaning Up
- Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
- User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage
- Suitable: Keep tightly closed. Store at 20°C
- Special Requirements: Air and light sensitive.

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 EN (EU). Respiratory protection is not required. Where protection is desired, use multipurpose combination (US) or type ABK (EN 14387) respirator cartridges.
- Hand: Protective gloves.
- Eye: Chemical safety goggles.

General Hygiene Measures
- Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance
- Physical State: Color
- Clear liquid: Almost colorless

Sigma Chemical - 04754
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Sigma-Aldrich Corporation
www.sigma-aldrich.com
Molecular Weight: 296.5 AMU

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<td>Solvent Content</td>
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<td>Evaporation Rate</td>
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N/A = not available

### Section 10 - Stability and Reactivity

**Stability**: Stable

**Materials to Avoid**: Strong oxidizing agents

**Hazardous Decomposition Products**: Carbon monoxide, Carbon dioxide

**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.
- **Eye Contact**: May cause eye irritation.
- **Inhalation**: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

**Sigma Chemical - O4754**

---

**Ingestion**: May be harmful if swallowed.

**Signs and Symptoms of Exposure**: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**RTECS Number**: BK0895000

**Chronic Exposure - Carcinogen**: Mouse - Skin: 54 GM/KG, 45W. Result: Tumorogenic. Equivocal tumorigenic agent by RTECS criteria. Blood Leukemia. Skin and Appendages: Other: Tumors.

### 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. Dissolve or mix the material with a combustible solvent and burn 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: None

**Non-Hazardous for Transport**: This substance is considered to be nonhazardous for transport.

**IATA**: Non-Hazardous for Air Transport

**Non-hazardous for air transport.**

### Section 15 - Regulatory Information

**EU Additional Classification**: S: 23/24/25

**Safety Statements**: Do not breathe vapor. Avoid contact with skin and eyes.

**US Classification and Label Text**: Caution: Avoid contact and inhalation.

**United States Regulatory Information**: SARA Listed: No

**TSCA Inventory Item**: Yes

**Canada Regulatory Information**: WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPP, and the MSDS contains all information required by the CPP.

**DRII**: Yes

**NDSSL**: 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 © 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.