**Material Safety Data Sheet**

**Version 3.0**  
**Revision Date:** 08/20/2009  
**Print Date:** 10/14/2010

1. **PRODUCT AND COMPANY IDENTIFICATION**
   - **Product name:** Methyl Orange
   - **Product Number:** 234109
   - **Brand:** Sigma-Aldrich
   - **Company:** Sigma-Aldrich  
     3050 Spruce Street  
     SAINT LOUIS MO 63103  
     USA
   - **Telephone:** (+1) 800-325-5022  
   - **Fax:** (+1) 800-325-5055

2. **COMPOSITION/INFORMATION ON INGREDIENTS**
   - **Synonyms:** 4-(Dimethylamino)phenylazo|benzenesulfonic acid|sodium salt  
     Acid Orange 52  
     Heilanthrin  
     Orange II
   - **Formula:** C_{14}H_{14}N_{2}Na_{2}S
   - **Molecular Weight:** 327.33 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>547-86-0</td>
<td>208-925-3</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

3. **HAZARDS IDENTIFICATION**
   - **Emergency Overview**
   - **OSHA Hazards**
     - **Toxic by ingestion**
   - **HMIS Classification**
     - **Health Hazard:** 2
     - **Flammability:** 0
     - **Physical Hazards:** 0
   - **NFPA Rating**
     - **Health Hazard:** 2
     - **Fire:** 0
     - **Reactivity Hazard:** 0
   - **Potential Health Effects**
     - **Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
     - **Skin:** May be harmful if absorbed through skin. May cause skin irritation.
     - **Eyes:** May cause eye irritation.
     - **Ingestion:** Toxic if swallowed.

4. **FIRST AID MEASURES**
   - **General advice**
     - Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
   - **If Inhaled**
     - If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
   - **In case of skin contact**
     - Wash off with soap and plenty of water. Consult a physician.
   - **In case of eye contact**
     - Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
   - **If swallowed**
     - Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. **FIRE-FIGHTING MEASURES**
   - **Flammable properties**
     - **Flash point:** No data available
     - **Ignition temperature:** No data available
   - **Suitable extinguishing media**
     - Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
   - **Special protective equipment for fire-fighters**
     - Wear self-contained breathing apparatus for fire fighting if necessary.

6. **ACCIDENTAL RELEASE MEASURES**
   - **Personal precautions**
     - Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.
   - **Environmental precautions**
     - Prevent further leakage or spillage if safe to do so. Do not at product enter drains.
   - **Methods for cleaning up**
     - Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. **HANDLING AND STORAGE**
   - **Handling**
     - Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
   - **Storage**
     - Keep container tightly closed in a dry and well-ventilated place.
     - Keep in a dry place.

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### 6. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Crystalline</td>
</tr>
<tr>
<td>Colour</td>
<td>Orange</td>
</tr>
<tr>
<td>Density</td>
<td>No data</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No data</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data</td>
</tr>
<tr>
<td>Ignition Temperature</td>
<td>No data</td>
</tr>
<tr>
<td>Lower Explosion Limit</td>
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</tr>
<tr>
<td>Upper Explosion Limit</td>
<td>No data</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data</td>
</tr>
</tbody>
</table>

### 8. STABILITY AND REACTIVITY

- Storage Stability: Stable under recommended storage conditions.
- Material to Avoid: Strong oxidizing agents.
- Hazardous Decomposition Products Formed Under Fire Conditions: Carbon oxides, nitrogen oxides (NOx), Sulphur oxides.
Product
Observe all federal, state, and local environmental regulations. 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.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 3143  Class: 6.1  Packing group: III
Proper shipping name: Dyes, solid, toxic, n.o.s. (Sodium 4-(4-dimethylaminophenylazo)benzenesulfonate)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 3143  Class: 6.1  Packing group: III
EMS-No: F-A, S-A
Proper shipping name: DYE, SOLID, TOXIC, N.O.S. (Sodium 4-(4-dimethylaminophenylazo)benzenesulfonate)
Marine pollutant: No

IATA
UN-Number: 3143  Class: 6.1  Packing group: III
Proper shipping name: Dye, solid, toxic n.o.s. (Sodium 4-(4-dimethylaminophenylazo)benzenesulfonate)

15. REGULATORY INFORMATION

OSHA Hazards
Toxic by ingestion

DSL Status
All components of this product are on the Canadian DSL list.

SARA 302 Components
Sara 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
Sara 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minima) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard
Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components
Sodium 4-(4-dimethylaminophenylazo)benzenesulfonate
CAS No.: 547-58-0
Revision Date: [insert date]

New Jersey Right To Know Components
Sodium 4-(4-dimethylaminophenylazo)benzenesulfonate
CAS No.: 547-58-0
Revision Date: [insert date]

California Prop. 65 Components
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Further Information
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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 Co., 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.