# SAFETY DATA SHEET

**Creation Date** 24-Nov-2010  
**Revision Date** 09-Jan-2015  
**Revision Number** 1

## 1. Identification

<table>
<thead>
<tr>
<th><strong>Product Name</strong></th>
<th>Methyl Orange</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cat No. :</strong></td>
<td>M216-25, M216-500</td>
</tr>
<tr>
<td><strong>Synonyms</strong></td>
<td>Acid Orange 52; C.I. 13025; Helianthise; MO; 4-[4-(Dimethylamino)phenylazo]benzenesulfonic acid, sodium salt</td>
</tr>
<tr>
<td><strong>Recommended Use</strong></td>
<td>Laboratory chemicals.</td>
</tr>
<tr>
<td><strong>Uses advised against</strong></td>
<td>No Information available</td>
</tr>
</tbody>
</table>

### Details of the supplier of the safety data sheet

- **Company**: Fisher Scientific  
  - One Reagent Lane  
  - Fair Lawn, NJ 07410  
  - Tel: (201) 796-7100

- **Emergency Telephone Number**: CHEMTREC®, Inside the USA: 800-424-9300  
  CHEMTREC®, Outside the USA: 001-703-527-3887

## 2. Hazard(s) identification

**Classification**  
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| **Acute oral toxicity** | Category 3 |

### Label Elements

**Signal Word**
- Danger

**Hazard Statements**
- Toxic if swallowed
Precautionary Statements

Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Storage
Store locked up

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
None identified

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Acid orange 52</td>
<td>547-58-0</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.

Ingestion
Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects
No information available.

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media
No information available

Flash Point
Method -
No information available

Autoignition Temperature
Not applicable

Explosion Limits
Upper
No data available
Lower
No data available

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
Nitrogen oxides (NOx) Carbon monoxide (CO) Carbon dioxide (CO₂)

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. Accidental release measures
Personal Precautions
Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.
Environmental Precautions
Avoid release to the environment.
Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage
Handling
Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing. Do not breathe vapors/dust. Do not ingest.
Storage
Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection
Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment
Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Orange</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>&gt; 300 °C / 572 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in hot water</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C14 H14 N3 Na O3 S</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>327.32</td>
</tr>
</tbody>
</table>
**10. Stability and reactivity**

**Reactive Hazard**
None known, based on information available

**Stability**
Stable under normal conditions.

**Conditions to Avoid**

**Incompatible Materials**
Strong oxidizing agents

**Hazardous Decomposition Products**
Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO₂)

**Hazardous Polymerization**
Hazardous polymerization does not occur.

**Hazardous Reactions**
None under normal processing.

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**11. Toxicological information**

**Acute Toxicity**

**Product Information**

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Acid orange 52</td>
<td>60 mg/kg (Rat)</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Toxicologically Synergistic Products**
No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation**
No information available

**Sensitization**
No information available

**Carcinogenicity**
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Acid orange 52</td>
<td>547-58-0</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Mutagenic Effects**
No information available

**Reproductive Effects**
No information available.

**Developmental Effects**
No information available.

**Teratogenicity**
No information available.

**STOT - single exposure**
None known

**STOT - repeated exposure**
None known

**Aspiration hazard**
No information available

**Symptoms / effects, both acute and delayed**
No information available

**Endocrine Disruptor Information**
No information available

**Other Adverse Effects**
The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

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**12. Ecological information**

**Ecotoxicity**
Do not empty into drains.

**Persistence and Degradability**
Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation / Accumulation**
No information available.
Mobility

Will likely be mobile in the environment due to its water solubility.

### 13. Disposal considerations

**Waste Disposal Methods**
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>UN-No</th>
<th>UN3143</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>DYES, SOLID, TOXIC, N.O.S.</td>
<td></td>
</tr>
<tr>
<td>Proper technical name</td>
<td>C.I. Acid orange 52</td>
<td></td>
</tr>
<tr>
<td>Hazard Class</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TDG</th>
<th>UN-No</th>
<th>UN3143</th>
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<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>DYE, SOLID, TOXIC, N.O.S.</td>
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<tr>
<td>Proper technical name</td>
<td>(METHYL ORANGE)</td>
<td></td>
</tr>
<tr>
<td>Hazard Class</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>IATA</th>
<th>UN-No</th>
<th>UN3143</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>DYE, SOLID, TOXIC, N.O.S.</td>
<td></td>
</tr>
<tr>
<td>Hazard Class</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMDG/IMO</th>
<th>UN-No</th>
<th>UN3143</th>
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<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>DYE, SOLID, TOXIC, N.O.S.</td>
<td></td>
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<tr>
<td>Hazard Class</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
<td></td>
</tr>
</tbody>
</table>

### 15. Regulatory information

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Acid orange 52</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>208-925-3</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**

X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule.
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable
SARA 313 Not applicable

**SARA 311/312 Hazardous Categorization**

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Acute Health Hazard</th>
<th>Chronic Health Hazard</th>
<th>Fire Hazard</th>
<th>Sudden Release of Pressure Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**International Inventories**

- Component: C.I. Acid orange 52
- TSCA: X
- DSL: X
- NDSL: -
- EINECS: 208-925-3
- ELINCS: -
- NLP: X
- PICCS: X
- ENCS: X
- AICS: X
- IECSC: X
- KECL: X
Reactive Hazard  
No  

Clean Water Act  
Not applicable  

Clean Air Act  
Not applicable  

OSHA Occupational Safety and Health Administration  
Not applicable  

CERCLA  
Not applicable  

California Proposition 65  
This product does not contain any Proposition 65 chemicals  

State Right-to-Know  
Not applicable  

U.S. Department of Transportation  
Reportable Quantity (RQ):  N  
DOT Marine Pollutant  N  
DOT Severe Marine Pollutant  N  

U.S. Department of Homeland Security  
This product does not contain any DHS chemicals.  

Other International Regulations  
Mexico - Grade  
No information available  

Canada  
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR  

WHMIS Hazard Class  
D1B  Toxic materials  

16. Other information  

Prepared By  
Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com  

Creation Date  
24-Nov-2010  
Revision Date  
09-Jan-2015  
Print Date  
09-Jan-2015  
Revision Summary  
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)  

Disclaimer  
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.  

End of SDS