1. PRODUCT AND COMPANY IDENTIFICATION

   Product name: Methyl Orange
   Product Number: 114510
   Brand: Sigma-Aldrich
   Company: Sigma-Aldrich
   Company Address: 3050 Spruce Street, SAINT LOUIS MO 63103, USA
   Telephone: +1 800-325-5832
   Fax: +1 800-325-5052
   Emergency Phone #: (314) 776-6555

2. HAZARDS IDENTIFICATION

   Emergency Overview
   OSHA Hazards
   Toxic by ingestion

   GHS Label elements, including precautionary statements
   Pictogram
   Signal word: Danger
   Hazard statement(s)
   H301: Toxic if swallowed.
   Precautionary statement(s)
   P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

   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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

   Synonyms: 4-[4-(Dimethylamino)phenylazo]benzenesulfonic acidsodium salt
              Acid Orange 52
              Helianthin
              Orange III
Formula: C₁₄H₁₄N₃NaO₃S
Molecular Weight: 327.33 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
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<tr>
<td>Sodium 4-(4-dimethylaminophenylazo)benzenesulphonate</td>
<td>547-58-0</td>
<td>208-925-3</td>
<td>-</td>
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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

**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 let product enter drains.

**Methods and materials for containment and cleaning up**
Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

**Precautions for safe handling**
Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Conditions for safe storage**
Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hand protection
Handle with gloves.

Eye protection
Face shield and safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form powder, crystalline
Colour orange

Safety data
pH no data available
Melting point no data available
Boiling point no data available
Flash point no data available
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Water solubility no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Sodium oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - rat - 60 mg/kg

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
Genotoxicity in vitro - Histidine reversion (Ames)
Genotoxicity in vitro - mouse - Embryo
Morphological transformation.
Genotoxicity in vitro - Human - fibroblast
Unscheduled DNA synthesis

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure (GHS)
no data available

Specific target organ toxicity - repeated exposure (GHS)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion Toxic if swallowed.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.

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

Additional Information
RTECS: DB6327000

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

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)benzenesulphonate)
- Marine pollutant: No
- Poison Inhalation Hazard: No

**IMDG**
- UN-Number: 3143
- Class: 6.1
- Packing group: III
- Proper shipping name: DYE, SOLID, TOXIC, N.O.S. (Sodium 4-(4-dimethylaminophenylazo)benzenesulphonate)
- 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)benzenesulphonate)

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 Minimis) 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)benzenesulphonate: CAS-No. 547-58-0

**New Jersey Right To Know Components**
- Sodium 4-(4-dimethylaminophenylazo)benzenesulphonate: CAS-No. 547-58-0

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

16. OTHER INFORMATION

**Further information**
- Copyright 2010 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.
- 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.