**SECTION 1: Identification**

1.1. Identification

Product form: Substance
Product name: Methyl Orange, Sodium Salt, ACS
CAS-No.: 547-58-0
Product code: LC16980
Formula: C14H14N3NaO3S
Synonyms: 4-dimethylaminoazobenzene-4'-sulfonic acid sodium salt / acid orange 52 / beta-helianthin / dimethylaniline orange / eniamethyl orange / gold orange / methyl orange B / methyl orange, sodium salt / orange 3 / p-((dimethylamino)phenyl)azo)benzene sulfonic acid sodium salt / porrier's orange III / p-sulfobenzeneazodimethylaniline sodium salt / sodium 4-(4-dimethylaminophenylazo)benzenesulfonate / tropaeoline D

1.2. Recommended use and restrictions on use

Use of the substance/mixture: Laboratory chemical
Textile: Dyestuff
Recommended use: Laboratory chemicals
Restrictions on use: Not for food, drug or household use

1.3. Supplier

LabChem, Inc.
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 or +1-703-741-5970

**SECTION 2: Hazard(s) identification**

2.1. Classification of the substance or mixture

GHS-US classification
Acute toxicity (oral) H301 Toxic if swallowed
Category 3
Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling
Hazard pictograms (GHS US)

Signal word (GHS US): Danger
Hazard statements (GHS US): H301 - Toxic if swallowed
Precautionary statements (GHS US): P264 - Wash exposed skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P405 - Store locked up.
P501 - Dispose of contents/container to comply with local, state and federal regulations
P301+P330+P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: Combustible Dust.

2.4. Unknown acute toxicity (GHS US)

Not applicable
SECTION 3: Composition/Information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Orange, Sodium Salt, ACS</td>
<td>(CAS-No.) 547-58-0</td>
<td>100</td>
<td>Acute Tox. 3 (Oral), H301</td>
</tr>
</tbody>
</table>

Substance type : Mono-constituent

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures


First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

First-aid measures after eye contact : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.


4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Coughing.

Symptoms/effects after skin contact : May stain the skin. Slight irritation.

Symptoms/effects after eye contact : Slight irritation.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical

Fire hazard : DIRECT FIRE HAZARD. Non-flammable. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD. Heating increases the fire hazard.

 Explosion hazard : DIRECT EXPLOSION HAZARD. Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD. Dust cloud can be ignited by a spark.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.


SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel


Emergency procedures : Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes.
Methyl Orange, Sodium Salt, ACS
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.1. Measures in case of dust release

6.1.2. For emergency responders

Protective equipment

Emergency procedures

Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark/explosionproof appliances/lighting equipment.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment

Methods for cleaning up

Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Take account of toxic/corrosive precipitation water. Powdered form: no compressed air for pumping over spills.

Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed

Precautions for safe handling

Hygiene measures

Pulverization rapidly increases toxic concentration.


Observe strict hygiene.

7.2. Conditions for safe storage, including any incompatibilities

Storage temperature

Heat-ignition

Prohibitions on mixed storage

Storage area

Special rules on packaging

5 - 30 °C

KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

KEEP SUBSTANCE AWAY FROM: oxidizing agents.

Store in a dry area. Keep container in a well-ventilated place. Keep locked up. Unauthorized persons are not admitted. Meet the legal requirements.

SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:


Materials for protective clothing:

GIVE GOOD RESISTANCE: neoprene. nitrile rubber
Hand protection:
Gloves

Eye protection:
Safety glasses. In case of dust production: protective goggles

Skin and body protection:
Protective clothing

Respiratory protection:
Dust production: dust mask with filter type P3

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Crystalline solid. Powder. Scales.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>6.5 (0.5 %)</td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt; 300 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt; 0.1 hPa (20 °C)</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>1</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1000 kg/m³</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>327.34 g/mol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water. Water: 0.02 g/100ml (25 °C) Ethanol: 0.1 g/100ml</td>
</tr>
<tr>
<td>Log Pow</td>
<td>-0.66 (Estimated value)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

VOC content: 0 %
Other properties: Basic reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No additional information available
10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Likely routes of exposure</th>
<th>Inhalation; Skin and eye contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Methyl Orange, Sodium Salt, ACS (547-58-0)**

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>60 mg/kg (Rat, Oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (oral)</td>
<td>60 mg/kg body weight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin corrosion/irritation</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH: 6.5 (0.5 %)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Serious eye damage/irritation</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH: 6.5 (0.5 %)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respiratory or skin sensitization</th>
<th>Not classified</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Germ cell mutagenicity</th>
<th>Not classified</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Carcinogenicity</th>
<th>Not classified</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Reproductive toxicity</th>
<th>Not classified</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Specific target organ toxicity – single exposure</th>
<th>Not classified</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Specific target organ toxicity – repeated exposure</th>
<th>Not classified</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Aspiration hazard</th>
<th>Not classified</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Potential Adverse human health effects and symptoms</th>
<th>Toxic if swallowed. Slightly irritant to skin. Slightly irritant to eyes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>AFTER INHALATION OF DUST: Coughing.</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>May stain the skin. Slight irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>Slight irritation.</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Ecology - general</th>
<th>Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - air</td>
<td>Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).</td>
</tr>
<tr>
<td>Ecology - water</td>
<td>Severe water pollutant (surface water). No data available on ecotoxicity.</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Methyl Orange, Sodium Salt, ACS (547-58-0)</th>
<th>Non degradable in the soil. Not readily biodegradable in water.</th>
</tr>
</thead>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Methyl Orange, Sodium Salt, ACS (547-58-0)</th>
<th>Log Pow (Estimated value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.66</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bioaccumulative potential</th>
<th>Not bioaccumulative.</th>
</tr>
</thead>
</table>

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available
### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

**Waste disposal recommendations**: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Dissolve or mix with a combustible solvent.


### SECTION 14: Transport information

#### Department of Transportation (DOT)

**In accordance with DOT**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport document description</td>
<td>UN2811 Toxic solids, organic, n.o.s., 6.1, III</td>
</tr>
<tr>
<td>UN-No.(DOT)</td>
<td>UN2811</td>
</tr>
<tr>
<td>Proper Shipping Name (DOT)</td>
<td>Toxic solids, organic, n.o.s.</td>
</tr>
<tr>
<td>Transport hazard class(es) (DOT)</td>
<td>6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132</td>
</tr>
<tr>
<td>Packing group (DOT)</td>
<td>III - Minor Danger</td>
</tr>
<tr>
<td>Hazard labels (DOT)</td>
<td>6.1 - Poison</td>
</tr>
</tbody>
</table>

**DOT Special Provisions (49 CFR 172.102)**

- IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 and 13M2);
- IP3 - Flexible IBCs must be silt-proof and water-resistant or must be fitted with a silt-proof and water-resistant liner.
  - T1 - 1.5 178.274(d)(2) Normal............. 178.275(d)(2)
  - TP3 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

**DOT Packaging Exceptions (49 CFR 173.1xxx)**

- 153

**DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)**

- 100 kg

**DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)**

- 200 kg

**DOT Vessel Stowage Location**

- A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.

**Other information**

- No supplementary information available.

#### Transportation of Dangerous Goods

**Transport document description**: UN2811 TOXIC SOLID, ORGANIC, N.O.S. (Methyl orange, sodium salt), 6.1, II

**UN-No. (TDG)**

- UN2811
Proper Shipping Name (Transportation of Dangerous Goods) : TOXIC SOLID, ORGANIC, N.O.S.

TDG Primary Hazard Classes : 6.1 - Class 6.1 - Toxic Substances

Packing group : II - Medium Danger

TDG Special Provisions : 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a)UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b)UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c)UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d)UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e)UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the “Food and Drugs Act”. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a)UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b)UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS. SOR/2014-306

Explosive Limit and Limited Quantity Index : 0.5 kg

Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 25 kg

**Transport by sea**

Transport document description (IMDG) : UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (Methyl orange, sodium salt), 6.1, II

UN-No. (IMDG) : 2811

Proper Shipping Name (IMDG) : TOXIC SOLID, ORGANIC, N.O.S.

Class (IMDG) : 6.1 - Toxic substances

Packing group (IMDG) : II - substances presenting medium danger

EmS-No. (1) : F-A

EmS-No. (2) : S-A

**Air transport**

Transport document description (IATA) : UN 2811 Toxic solid, organic, n.o.s. (Methyl orange, sodium salt), 6.1, II

UN-No. (IATA) : 2811

Proper Shipping Name (IATA) : Toxic solid, organic, n.o.s.

Class (IATA) : 6.1 - Toxic Substances

Packing group (IATA) : II - Medium Danger

**SECTION 15: Regulatory information**

**15.1. US Federal regulations**

Methyl Orange, Sodium Salt, ACS (547-58-0) Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes | Health hazard - Acute toxicity (any route of exposure)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

**15.2. International regulations**

**CANADA**

Methyl Orange, Sodium Salt, ACS (547-58-0) Listed on the Canadian DSL (Domestic Substances List) Not listed on the Canadian DSL (Domestic Substances List)

**EU-Regulations**

No additional information available
Methyl Orange, Sodium Salt, ACS
Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

National regulations
No additional information available

15.3. US State regulations
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Revision date : 03/13/2019
Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H301</th>
<th>Toxic if swallowed</th>
</tr>
</thead>
</table>

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating
Health : 2 Moderate Hazard - Temporary or minor injury may occur
Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : E
- Safety glasses, Gloves, Dust respirator

SDS US LabChem

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