Material Safety Data Sheet
Methyl Orange - Xylene Cyanole Solutions

Section 1 - Chemical Product and Company Identification

MSDS Name:
Methyl Orange - Xylene Cyanole Solutions

Catalog Numbers:
LC17040, LC17020

Synonyms:
Methyl Orange, Modified; Methyl Orange-Xylene Cyanol

Company Identification:
LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:
(412) 826-5230

Emergency Phone Number:
(800) 424-9300

CHEMTREC Phone Number:
(800) 424-9300 or
011-703-527-3887

Section 2 – Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>&gt;99</td>
</tr>
<tr>
<td>547-58-0</td>
<td>Methyl orange</td>
<td>0.01 - 0.1</td>
</tr>
<tr>
<td>2650-17-1</td>
<td>Xylene cyanol FF</td>
<td>0.014 - 0.1</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

Appearance: Gray-green solution
Caution. May cause mild eye irritation.
Target Organs: None known.

Potential Health Effects
Eye:
May cause mild eye irritation.

Skin:
May cause mild skin irritation.

Ingestion:
Low hazard for normal industrial handling.

Inhalation:
Low hazard for normal industrial handling.
Material Safety Data Sheet
Methyl Orange - Xylene Cyanole Solutions

Chronic:
No information found.

Section 4 - First Aid Measures

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

Skin:
Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion:
Get medical aid at once. Give oxygen if respiration is depressed.

Inhalation:
Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

Notes to Physician:
Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Irritating and toxic gases may be generated by thermal decomposition or combustion. Move container if possible. Avoid breathing vapors.

Extinguishing Media:
For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:
No information found.

Flash Point:
No information found.

NFPA Rating:
Health- 0, Flammability- 0, Instability- 0.

Explosion Limits:
Lower: N/A  Upper: N/A

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in suitable containers labeled for later disposal.

Section 7 - Handling and Storage
Material Safety Data Sheet
Methyl Orange - Xylene Cyanole Solutions

Handling:
Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas.

Storage:
Store capped at room temperature. Protect from heat and incompatibles.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Provide local exhaust or general dilution ventilation.

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>None of the components are on this list.</td>
<td>None of the components are on this list.</td>
<td>None of the components are on this list.</td>
</tr>
<tr>
<td>Methyl orange</td>
<td>None of the components are on this list.</td>
<td>None of the components are on this list.</td>
<td>None of the components are on this list.</td>
</tr>
<tr>
<td>Xylene cyanol FF</td>
<td>None of the components are on this list.</td>
<td>None of the components are on this list.</td>
<td>None of the components are on this list.</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
None listed

Personal Protective Equipment

Eyes:
Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:
Wear appropriate protective gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
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.

Section 9 - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State:</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Color:</td>
<td>Gray-green</td>
</tr>
<tr>
<td>Odor:</td>
<td>Odorless</td>
</tr>
<tr>
<td>pH:</td>
<td>No information found.</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>No information found.</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>No information found.</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>No information found.</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>No information found.</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>212°F (100°C)</td>
</tr>
<tr>
<td>Freezing/Melting Point:</td>
<td>32°F (0°C)</td>
</tr>
<tr>
<td>Decomposition Temperature:</td>
<td>No information found.</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>Soluble</td>
</tr>
<tr>
<td>Specific Gravity/Density:</td>
<td>1.0</td>
</tr>
<tr>
<td>Molecular Formula:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet
Methyl Orange - Xylene Cyanole Solutions

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Incompatible materials, excess heat.

Incompatibilities with Other Materials:
Strong oxidizing agents.

Hazardous Decomposition Products:
Oxides of nitrogen, oxides of carbon, oxides of sodium, nitrogen, sulfur oxides.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 7732-18-5: ZC0110000.
CAS# 547-58-0: DB6327000.
CAS# 2650-17-1: unlisted.

LD50/LC50:
CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.

CAS# 547-58-0:
Oral, rat: LD50 = 60 mg/kg.

CAS# 2650-17-1:
No information found.

Carcinogenicity:
CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 547-58-0: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 2650-17-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:
No information found.

Teratogenicity:
No information found.

Reproductive:
No information found.

Mutagenicity:
No information found.

Neurotoxicity:
No information found.

Section 12 - Ecological Information

No information found
Material Safety Data Sheet
Methyl Orange - Xylene Cyanole Solutions

Section 13 - Disposal Considerations
Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information
US DOT
Shipping Name: Not regulated.
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information
US Federal
TSCA:
CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 547-58-0 is listed on the TSCA Inventory.
CAS# 2650-17-1 is listed on the TSCA Inventory.
SARA Reportable Quantities (RQ):
None of the components are on this list.
CERCLA/SARA Section 313:
None of the components are on this list.
OSHA - Highly Hazardous:
None of the chemicals in this product are considered highly hazardous by OSHA.

US State
State Right to Know:
None of the components are listed on state Right-to-Know lists from California, Pennsylvania, New Jersey, Florida, Minnesota, or Massachusetts.

California Regulations:
None.

European/International Regulations
Canadian DSL/NDSL:
CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 547-58-0 is listed on Canada's DSL List.
CAS# 2650-17-1 is listed on Canada's DSL List.
Canada Ingredient Disclosure List:
CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
CAS# 547-58-0 is listed on Canada's Ingredient Disclosure List.
CAS# 2650-17-1 is not listed on Canada's Ingredient Disclosure List.
Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.