MATERIAL SAFETY DATA SHEET

Methyl Acetate

Section 1 - Chemical Product and Company Identification

MSDS Name: Methyl acetate
Synonyms: Acetic acid methyl ester

Company Identification: (INDIA)
Veritas House, 70 Mint Road, Fort, Mumbai - 400 001. INDIA
For information in the INDIA, call:
Tel: +91 - 22 - 2275 5555 / 6184 0000,
Fax: +91 - 22 - 2275 5556 / 6184 0001

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>%</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>79-20-9</td>
<td>Methyl acetate</td>
<td>99%</td>
<td>201-185-2</td>
</tr>
</tbody>
</table>

Hazard Symbols: XI F

Risk Phrases: 11 36 66 67

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

Potential Health Effects

Eye:
Causes eye irritation. Causes redness and pain.

Skin:
Causes skin irritation. Causes redness and pain. May be harmful if absorbed through the skin.

Ingestion:
May cause nausea and vomiting. May be harmful if swallowed. May cause central nervous system depression.

Inhalation:
Causes respiratory tract irritation. Exposure produces central nervous system depression. May be harmful if inhaled.

Chronic:

Section 4 - First Aid Measures

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

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

Ingestion:
Get medical aid. Wash mouth out with water.

Inhalation:
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:
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. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media:
Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide. Water may be ineffective.

Section 6 - Accidental Release Measures

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

SpillsLeaks:
Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool.

Section 7 - Handling and Storage

Handling:
Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.

Storage:
Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Use adequate ventilation to keep airborne concentrations low.

Exposure Limits
CAS# 79-20-9:
United Kingdom, WEL - TWA: 200 ppm TWA; 616 mg/m3 TWA United Kingdom, WEL - STEL: 250 ppm STEL; 770 mg/m3 STEL
United States OSHA: 200 ppm TWA; 610 mg/m3 TWA
Belgium - TWA: 200 ppm VLE; 615 mg/m3 VLE Belgium - STEL: 250 ppm VLE; 768 mg/m3 VLE
France - VME: 200 ppm VME; 610 mg/m3 VME France - VLE: 250 ppm VLE; 760 mg/m3 VLE
Germany: 200 ppm TWA; 610 mg/m3 TWA
Japan: 200 ppm OEL; 610 mg/m3 OEL
Malaysia: 200 ppm TWA; 606 mg/m3 TWA
Netherlands: 200 ppm MAC; 610 mg/m3 MAC
Spain: 200 ppm VLA-ED; 616 mg/m3 VLA-ED Spain: 250 ppm VLA-EC; 770 mg/m3 VLA-EC

Personal Protective Equipment

Eyes:
Wear chemical splash 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>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>220 mbar @ 20 deg C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.38 mPa s @ 20 deg C</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>56 deg C @ 760 mmHg (135.32°F)</td>
</tr>
<tr>
<td>Freezing/Melting Point</td>
<td>-98 deg C (144.40°F)</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>455 deg C (851.00°F)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>(-) 10 deg C (14.00°F)</td>
</tr>
<tr>
<td>Explosion Limits: Lower</td>
<td>3 Vol %</td>
</tr>
<tr>
<td>Explosion Limits: Upper</td>
<td>16 Vol %</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>250 g/l (20°C)</td>
</tr>
<tr>
<td>Specific Gravity/Density</td>
<td>0.933 g/cc</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C3H6O2</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>74.08</td>
</tr>
</tbody>
</table>

Section 10 - Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Stability</td>
<td>Stable under normal temperatures and pressures.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>High temperatures, incompatible materials, ignition sources, moisture.</td>
</tr>
<tr>
<td>Incompatibilities with Other Materials</td>
<td>Moisture, acids, bases.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Carbon monoxide, carbon dioxide.</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Has not been reported.</td>
</tr>
</tbody>
</table>

Section 11 - Toxicological Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>RTECS#</td>
<td>CAS# 79-20-9: AI9100000</td>
</tr>
<tr>
<td>LD50/LC50:</td>
<td>RTECS: CAS# 79-20-9: Dermal, guinea pig: LD50 = &gt;20 mL/kg; Draize test, rabbit, eye: 100 mg/24H Moderate; Draize test, rabbit, skin: 500 mg/24H Mild; Draize test, rabbit, skin: 20 mg/24H Moderate; Oral, rabbit: LD50 = 3705 mg/kg; Oral, rat: LD50 = &gt;5 gm/kg; Skin, rabbit: LD50 = &gt;5 gm/kg;</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Methyl acetate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.</td>
</tr>
<tr>
<td>Other</td>
<td>See actual entry in RTECS for complete information.</td>
</tr>
</tbody>
</table>

Section 12 - Ecological Information
Ecotoxicity:
- **Fish:** Zebrafish: LC50: 250-350 mg/l; 96H
- **Daphnia:** EC50: 1027 mg/l; 48H
- **Algae:** IC50: >120 mg/l; 72H;
- **Bacteria:** Phytobacterium phosphoreum: EC50: 6100 mg/l; 30min; Microtox test

Other:
- Biodegradable. Do not empty into drains.
- log POW: 0.18

### Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.

### Section 14 - Transport Information

<table>
<thead>
<tr>
<th>IATA</th>
<th>IMO</th>
<th>RID/ADR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name</td>
<td>METHYL ACETATE</td>
<td>METHYL ACETATE</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>UN Number</td>
<td>1231</td>
<td>1231</td>
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<tr>
<td>Packing Group</td>
<td>II</td>
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</table>

### Section 15 - Regulatory Information

**European/International Regulations**
European Labeling in Accordance with EC Directives

**Hazard Symbols:** XI F

**Risk Phrases:**
- R 11 Highly flammable.
- R 36 Irritating to eyes.
- R 66 Repeated exposure may cause skin dryness or cracking.
- R 67 Vapours may cause drowsiness and dizziness.

**Safety Phrases:**
- S 16 Keep away from sources of ignition - No smoking.
- S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S 29 Do not empty into drains.
- S 33 Take precautionary measures against static discharges.

**WGK (Water Danger/Protection)**
- CAS# 79-20-9: 1

**Canada**
- CAS# 79-20-9 is listed on Canada's DSL List

**US Federal**
- TSCA
- CAS# 79-20-9 is listed on the TSCA Inventory.

### Section 16 - Other Information

<table>
<thead>
<tr>
<th>MSDS Creation Date:</th>
<th>July 22, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision #0 Date</td>
<td></td>
</tr>
</tbody>
</table>
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