Methyl vinyl ketone (cas 78-94-4) MSDS

Section 1 - Chemical Product and Company Identification

MSDS Name: Methyl vinyl ketone
Catalog Numbers: AC415060000, AC415061000, AC415065000
Synonyms: 3-Buten-2-one, 1-Penten-3-one, MVK

Company Identification:
Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410
For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-94-4</td>
<td>Methyl vinyl ketone</td>
<td>99</td>
<td>201-160-6</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Not available.
Target Organs: None.

Potential Health Effects: The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.

Section 4 - First Aid Measures

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

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

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

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

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. Flammable liquid and vapor.

Extinguishing Media: Use agent most appropriate to extinguish fire.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 4; Flammability: 3; Instability: 2

Section 6 - Accidental Release Measures

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section.

Section 7 - Handling and Storage

Handling: Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame.

Storage: Keep away from heat, sparks, and flame.
Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

### Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl vinyl ketone</td>
<td>Skin - potential significant contribution to overall exposure by the cutaneous route; 0.2 ppm Ceiling</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Methyl vinyl ketone: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

- **Eyes:** Not available.
- **Skin:** Wear appropriate protective gloves and clothing to prevent skin exposure. Wear appropriate protective gloves to prevent skin exposure.
- **Clothing:** Wear appropriate protective clothing to minimize contact with skin.
- **Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

### Physical and Chemical Properties

- **Physical State:** Not available.
- **Appearance:** Not available.
- **Odor:** None reported.
- **pH:** Not available.
- **Vapor Pressure:** 130 mbar @ 28 C
- **Vapor Density:** Not available.
- **Evaporation Rate:** Not available.
- **Viscosity:** Not available.
- **Boiling Point:** 81 deg C
- **Freezing/Melting Point:** 0 deg C
- **Decomposition Temperature:** Not available.
- **Solubility:** Not available.
- **Density:** 0.8390g/cm³
- **Molecular Formula:** H₂CCHCOCH₃
- **Molecular Weight:** 70.09

### Stability and Reactivity

- **Chemical Stability:** Stable under normal temperatures and pressures.
- **Conditions to Avoid:** Incompatible materials, strong oxidants.
- **Incompatibilities with Other Materials:** Strong bases - strong oxidizing agents - heat - light - strong reducing agents.
- **Hazardous Decomposition Products:** Carbon monoxide, carbon monoxide, carbon dioxide.
- **Hazardous Polymerization:** Has not been reported.

### Toxicological Information

- **RTECS#:** 78-94-4: EM9800000
- **LD₅₀/LC₅₀:**
  - Inhalation, mouse: LC₅₀ = 8 mg/m³/2H;
  - Inhalation, mouse: LC₅₀ = 16 mg/m³;
  - Inhalation, rat: LC₅₀ = 7 mg/m³/4H;
  - Inhalation, rat: LC₅₀ = 14 mg/m³;
  - Oral, mouse: LD₅₀ = 23300 ug/kg;
  - Oral, mouse: LD₅₀ = 33.5 mg/kg;
  - Oral, rat: LD₅₀ = 23100 ug/kg;
  - Oral, rat: LD₅₀ = 31 mg/kg;

- **Carcinogenicity:** CAS# 78-94-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
- **Epidemiology:** No information available.
- **Teratogenicity:** No information available.
- **Reproductive Effects:** No information available.
- **Mutagenicity:** No information available.
- **Neurotoxicity:** No information available.

### Ecological Information

No information available.

### Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
Section 14 - Transport Information

<table>
<thead>
<tr>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>Not regulated as a hazardous material</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td></td>
</tr>
<tr>
<td>UN Number:</td>
<td></td>
</tr>
<tr>
<td>Packing Group:</td>
<td></td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 78-94-4 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances
CAS# 78-94-4: 10 lb TPQ

Section 313
No chemicals are reportable under Section 313.

Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
CAS# 78-94-4 is considered highly hazardous by OSHA.

STATE
CAS# 78-94-4 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

California Prop 65
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives
Hazard Symbols:
T+ F

Risk Phrases:
R 11 Highly flammable.
R 25 Toxic if swallowed.
R 26 Very toxic by inhalation.
R 36/38 Irritating to eyes and skin.

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 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 9 Keep container in a well-ventilated place.

WGK (Water Danger/Protection)
CAS# 78-94-4: No information available.

Canada - DSL/NDSL
CAS# 78-94-4 is listed on Canada's DSL List.

Canada - WHMIS
WHMIS: Not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List
CAS# 78-94-4 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/05/1998
Revision #5 Date: 3/26/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.