MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MAVIDON ACETONE
GENERAL USE: Solvent
PRODUCT DESCRIPTION: Colorless liquid, extremely flammable

MANUFACTURER'S NAME
Mavidon Medical Products

DATE PREPARED: July 2, 2001
SUPERSEDES: New

ADDRESS (NUMBER, STREET, P.O. BOX)
2105 7th Avenue North
Lake Worth, FL 33461

TELEPHONE NUMBER FOR INFORMATION
(561) 585-2227

DISTRIBUTOR'S NAME
Same

TELEPHONE NUMBER FOR INFORMATION

ADDRESS (NUMBER, STREET, P.O. BOX)

EMERGENCY TELEPHONE NUMBER
InfoTrac (800) 535-5053 Outside USA (352) 323-3500

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS | CAS # | % (by weight) | OSHA PEL | ACGIH TWA |
-------------------------|------|--------------|---------|----------|
Acetone (a,b) | 67-64-1 | 100 | 1000 | 2400 |

OSHA REGULATED? | NTP? | IARC MONOGRAPHS? | OSHA REGULATED? |
---------------|------|-----------------|----------------|
No | No | No | No |

(b) Indicates that the Resource Conservation and Recovery Act (RCRA) has determined the waste for this chemical is listed as hazardous and must be handled according to regulations in 40 CFR 260-281.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Colorless flammable liquid, potentially hazardous vapors. Can cause eye and skin irritation upon contact. Inhalation of vapors can cause anesthetic effect leading to death in poorly ventilated areas. Hazard symbols for this product - F, XI, XN

POTENTIAL HEALTH EFFECTS
INHALATION: High concentrations are irritating to the respiratory tract; may cause headache, dizziness, nausea, vomiting and malaise.

SKIN: Brief contact may cause slight irritation; prolonged contact may cause moderate reddening, swelling and possible necrosis.

EYES: Contact causes severe irritation and pain associated with redness and swelling of the conjunctiva.

INGESTION: Moderately toxic; may cause headache, dizziness, diarrhea and general weakness; large doses may result in red blood cell hemolysis.

CARCINOGENICITY

NTP? | No | IARC MONOGRAPHS? | No | OSHA REGULATED? | No
SECTION 4 - FIRST AID MEASURES

INHALATION: Remove affected person to fresh air; provide oxygen if breathing is difficult; if affected person is not breathing, administer CPR and seek emergency medical attention.

SKIN: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

EYES: Remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

INGESTION: Give two glasses of water for dilution; induce vomiting by sticking fingers down throat; never give anything by mouth to an unconscious person; seek medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 
-18° F (-27.8 º C) 
LEL: 2.6% 
UEL: 12.8%

GENERAL HAZARDS: Product is flammable. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

EXTINGUISHING MEDIA
Carbon dioxide, water fog, dry chemical, chemical foam

FIRE FIGHTING PROCEDURES
Firefighters must wear full facepiece self-contained breathing apparatus in positive pressure mode. Do not use solid stream of water since stream will scatter and spread fire. Fine water spray can be used to keep fire-exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers can explode due to buildup of pressure when exposed to extreme heat. Do not use direct stream of water on pool fires as product may reignite on water surface. Caution - Material is flammable!

HAZARDOUS COMBUSTION PRODUCTS
Smoke, fumes, oxides of carbon

SECTION 6 - ENVIRONMENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: CAUTION - FLAMMABLE - Evacuate and ventilate area; confine and absorb into absorbent; place material into approved containers for disposal; for spills in excess of allowable limits notify the National Response Center (800) 424 - 8802; refer to CERCLA 40 CFR 302 for detailed instructions concerning reporting requirements.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. CAUTION - FLAMMABLE - keep away from all sources of ignition. "Empty" containers may contain residue which may form explosive vapors. Do not weld or cut near empty container that has not been professionally reconditioned. Use non-sparking tools when opening and closing containers. Maintain well ventilated work areas to minimize exposure when handling this material.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS
The use of local exhaust ventilation is recommended to control emissions near the source. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment. See Section 2 for Component Exposure Guidelines.

PERSONAL PROTECTION:

RESPIRATORY PROTECTION (SPECIFY TYPE): None required while threshold limits (Section 2) are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.

PROTECTIVE GLOVES: Neoprene or rubber gloves with cuffs.

EYE PROTECTION: Safety goggles with side shields

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety eyewash nearby

WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.
**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

- **VAPOR PRESSURE (MM Hg)**: 181 mm Hg @ 20 °C
- **SPECIFIC GRAVITY (WATER = 1)**: 0.785
- **SOLUBILITY IN WATER**: Complete
- **pH**: 7.0
- **BOILING POINT**: 133°F (56.1 °C)
- **VISCOSITY**: Not listed

**SECTION 10 - STABILITY AND REACTIVITY**

- **STABILITY**: STABLE: XXX
- **CONDITIONS TO AVOID**: Extreme temperatures, open flames, sparks
- **HAZARDOUS DECOMPOSITION OR BYPRODUCTS**: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced.
- **HAZARDOUS POLYMERIZATION**: MAY OCCUR: XXX

**SECTION 11 - TOXICOLOGICAL INFORMATION**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>%</th>
<th>CAS #</th>
<th>LD50 of Ingredient</th>
<th>LC50 of Ingredient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone (a,b)</td>
<td>100</td>
<td>67-64-1</td>
<td>9750 mg / kg Oral - rat</td>
<td>16,000 ppm / 4 hr Inhalation - rat</td>
</tr>
</tbody>
</table>

**SECTION 12 - ECOLOGICAL INFORMATION**

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Dispose of in accordance with Local, State, and Federal Regulations. This product may produce concentrated hazardous vapors or fumes in a disposal container creating a dangerous environment. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations for ignitable materials. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway.

**SECTION 14 - TRANSPORT INFORMATION**

- **HAZARD CLASS / Pack Group**: 3 / II
- **REFERENCE**: 49 CFR 173.150, .202, .242
- **IDENTIFICATION NUMBER**: UN 1090
- **LABEL**: FLAMMABLE LIQUID
- **HAZARD SYMBOLS**: F

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EC, Canadian TDG, and United Nations TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.
**SECTION 15 - REGULATORY INFORMATION**

**TSCA (Toxic substance Control Act)**
Components of this product are listed on the TSCA Inventory.

**SARA TITLE III (Superfund Amendments and Reauthorization Act)**
311/312 Hazard Categories
Acute health, flammable

313 Reportable Ingredients:
None

**CERCLA (Comprehensive Response Compensation and Liability Act)**
(b) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture = 5000 lbs) or greater amounts, according to 40 CFR 302.

**CPR (Canadian Controlled Products Regulations)**
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations

**IDL (Canadian Ingredient Disclosure List)**
Components of this product listed on the Canadian Ingredient Disclosure List are shown in Section 2.

**EINECS (European Inventory of Existing Commercial Chemical Substances)**
Components of this product are on the European Inventory of Existing Commercial Chemical Substances

<table>
<thead>
<tr>
<th>EC Risk Phrases</th>
<th>EC Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>R11 Highly flammable</td>
<td>S16 Keep away from sources of ignition</td>
</tr>
<tr>
<td>R20 Harmful by inhalation</td>
<td>S23 Do not breathe vapor</td>
</tr>
<tr>
<td>R36 Irritating to eyes</td>
<td>S25 Avoid contact with eyes</td>
</tr>
<tr>
<td>R38 Irritating to skin.</td>
<td>S28 After contact with skin, wash immediately with plenty of soap and water</td>
</tr>
<tr>
<td></td>
<td>S29 Do not empty into drains</td>
</tr>
</tbody>
</table>

**SECTION 16 - OTHER INFORMATION**

No specific notes.

**HMIS HAZARD RATINGS**

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 0 = INSIGNIFICANT</td>
<td>3 = HIGH</td>
<td></td>
</tr>
<tr>
<td>0 = ININSIGNIFIC</td>
<td>1 = SLIGHT</td>
<td>4 = EXTREME</td>
</tr>
<tr>
<td>2 = MODERATE</td>
<td></td>
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</tbody>
</table>

**PERSONAL PROTECTIVE EQUIPMENT**

| B Safety Glasses, Gloves |

**REVISION SUMMARY:**
This MSDS has been revised in the following sections:
No revisions available

**MSDS Prepared by:** Comprehensive Data Base, Inc.
P.O. Box 5604
Lakeland, FL 33807 USA
(863) 644 - 3298 www.compdatabase.com

The information contained herein is believed to be accurate but is not warranted to be so. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.