OLIVER CHEMICAL COMPANY, INC.

2908 Spring Grove Avenue
Cincinnati, Ohio 45225

H.M.I.S.  
HEALTH 2 Date: 1/10/05  
FLAMMABILITY 0 MSDS Number: MC 377  
REACTIVITY 0 Phone (888) 541-OLCO  
GLOVES & GOGGLES 24 Hour emergency phone (888) 541-OLCO

Chemtrec 1-800-424-9300

1. PRODUCT IDENTIFICATION
PRODUCT NAME: ACID CELL SOAK COMPOUND II
DOT PROPER SHIPPING NAME: Hydrochloric acid, solution, 8, UN 1789, PG II, ERG # 60

2. HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Specific Chemical Identity)</td>
<td>CAS No</td>
<td>% WGT</td>
<td>PEL</td>
</tr>
<tr>
<td>*Aqueous Hydrogen Chloride</td>
<td>76747-01-0</td>
<td>&lt;9</td>
<td>7mg/M3</td>
</tr>
<tr>
<td>N/A</td>
<td>144-62-7</td>
<td>&lt;2</td>
<td>1mg/M3</td>
</tr>
<tr>
<td>Oxalic Acid</td>
<td>2 (ACGIH STEL)</td>
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</tbody>
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*Reportable elements under Section 313 of the Superfund Amendments and Reauthorization Act

3. PHYSICAL DATA
Boiling Point: 108°C Specific Gravity (H₂O =1): 1.06
Vapor Pressure (240°F): 74.2 abs Melting Point: -17°C
Vapor Density (air=1): Nonvolatile Evaporation Rate: Nonvolatile
Solubility in water: Complete (butyl acetate = 1)
Appearance and Odor: Purple liquid, nonspecific scent
4. FIRE AND EXPLOSION DATA
Flash Point: Above 180°C Flammable Limits: No relevant information found
Extinguishing Media: water spray, alcohol foam, CO₂
Special Fire Fighting Procedures: Use NIOSH/MSHA approved self-contained breathing apparatus in areas where this material is involved in a fire, as well as protection for skin and eyes.
Unusual Fire and Explosion Hazards: This product is nonflammable, but at flame temperatures will react with most metals with evolution of hydrogen, which may cause fire or explosion with air.

5. REACTIVITY DATA
Conditions contributing to instability: Under normal conditions this product is stable.
Incompatibility: Avoid contaminating with oxidizing agents, chlorates or highly flammable substances. Use caution when mixing with strong bases because the high heat of reaction can generate high temperatures.
Hazardous Decomposition Products: None
Conditions contributing to hazardous polymerization: None

6. HEALTH HAZARD INFORMATION
Route(s) of entry: Eyes, skin, inhalation
Health Hazards: **Acute:** Burns skin, eye (possible permanent corneal damage), eyes should be washed immediately, with fresh water or boric acid eye wash solution, mucous membranes of the respiratory tract, mouth, throat, esophagus and stomach.

**Chronic:** Occupational exposure to this material has not been reported to cause significant adverse health effects when recommended safety precautions are followed. This product has a low vapor pressure at room temperature and is not expected to present a significant inhalation hazard under ambient conditions. This product, however, can be irritating to the respiratory tract if inhaled as a mist or if the material is vaporized. Dermal contact is expected to be the primary route of exposure to this product. This product is considered corrosive to the eyes and skin.
Signs and symptoms of exposure: Burning eyes, redness of skin.
Carcinogenicity: Not known to be carcinogenic or mutagenic.
Medical conditions generally aggravated by exposure: When appropriate precautions are taken no medical conditions have been aggravated.

**Emergency and first aid procedures**
**Eyes:** Object is to flush material out immediately then seek medical attention. **Immediately** flush eyes with large amounts of water for at least fifteen minutes holding lids apart to ensure flushing of the entire surface. Washing eyes within one minute is essential to achieve maximum effectiveness. Seek medical attention immediately. **Skin:** Wash with plenty of water for fifteen minutes. Remove contaminated clothing and wash before reuse. Footwear should be decontaminated before reuse. Seek medical attention if symptoms are present. **Ingestion:** Never give anything by mouth to an unconscious person. If swallowed, do not induce
vomiting. Give large quantities of water. If vomiting occurs spontaneously, keep airway clear. Seek medical attention immediately.

7. ENVIRONMENTAL PROCEDURES
Steps to be take in case material is released or spilled: Using appropriate protection (impervious gloves, coveralls, boots, goggles, etc.) contain spill. Flush area with potable water. Neutralize remaining traces with a dilute baking soda solution to a pH of 6 - 8. Waste disposal Method: Due to widespread variance in disposal regulations, consult federal, state, and local regulatory agencies for proper disposal of this product. Precautions to be taken in handling and storing: Good industrial hygiene practices should be adhered to when handling and storing this product. Avoid contact with undiluted product.

8. INDUSTRIAL HYGIENE CONTROL MEASURES
Respiratory Protection: Where required use only NIOSH/MSHA approved respirator following manufactures recommendation where mist or spray of concentrate may be generated.
Ventilation: Use local ventilation where spray or mists of concentrate may be generated.
Eyes: Chemical splash goggles and face shield should be worn when working with this product.
Protective Gloves: Gloves coated with rubber, synthetic elastomers, PVC, or other impervious material should be worn when handling this product to minimize skin contact.
Other protective clothing or equipment: Standard work clothes should be worn. Wash soiled clothing in soap and water and dry before reuse. Eyewash facilities should be accessible.

This Material Safety Data Sheet was prepared in accordance with 29 CFR 1910.1200. All information, recommendations and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable, however it is the user’s responsibility to determine the safety, toxicity and suitability for their own use of the product described herein. Since actual use by others is beyond our control, no guarantee expressed or implied is made by Oliver Chemical Company, Inc. as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does Oliver Chemical Company, Inc. assume any liability arising out of use by others of the product referred herein. Nor is the information herein to be construed as absolutely complete since addition information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.