1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: AVANCE CONCENTRATED HARD WATER MACHINE DETERGENT
24 Hour CHEMTREC Number: 800-424-9300
Product Description: A machine dishwashing concentrate.
MSDS Number: 118165

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients | CAS Number | Weight | ACGIH | OSHA
--- | --- | --- | --- | ---
Sodium Hydroxide | 1310-73-2 | < 35% | 2 mg/m³ | 2 mg/m³
Polyacrylic Acid | 68479-09-4 | < 3.0% | NE | NE

3. HAZARDS IDENTIFICATION

***EMERGENCY OVERVIEW***
Danger. Corrosive liquid. Contains Sodium Hydroxide. Causes eye and skin burns. Corrosive to skin, eyes and body tissues. May be harmful or fatal if swallowed. Vapor harmful.

POTENTIAL HEALTH EFFECTS

Eye Contact: Causes eye irritation and burns. Symptoms include stinging, tearing, redness and swelling. Small quantities can result in permanent damage and loss of vision.
Skin Contact: Causes skin irritation and burns. Symptoms include redness, burning and swelling of skin, burns and other skin damage. Prolonged contact destroys tissue. Mist from solutions can cause irritant dermatitis.
Inhalation: Inhalation of mists can cause damage to the upper respiratory tract and to the lung tissue depending on the severity of exposure. Symptoms include severe irritation and burns to the nose, throat and respiratory tract.
Ingestion: May be harmful or fatal. May cause severe stomach and intestinal irritation (nausea, vomiting, diarrhea). Aspiration hazard.
General: Pre-existing lung and skin disorders may be aggravated by exposure to this material.

4. FIRST AID MEASURES

Eye Contact: Flush eyes immediately with plenty of cool water for at least 15 minutes. Get medical attention immediately. Do not wear contact lenses while using this product.
Skin Contact: Immediately flush skin with plenty of water. Launder clothing before reuse. If irritation persists, consult a physician.
Inhalation: Remove person to fresh air. Restore breathing if necessary. If irritation persists, consult a physician.
Ingestion: Do not induce vomiting. Give large amounts of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

Flashpoint: > 200°F (TCC)
Flammable Properties: None expected
Extinguishing Media: Water spray, Carbon Dioxide, dry chemical.
Fire Fighting Instructions: Wear a self-contained breathing apparatus with full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area. Wear protective goggles and gloves. Flush any residues with plenty of water and neutralize to below pH of 12.5 if necessary. Dispose of residue in chemical receptacle in a sanitary landfill. Do not reuse empty drums. Crush and discard or give to a drum re-conditioner for recycling. Follow All Federal, State and Local Regulations regarding waste disposal. Product as supplied is a DO02 unspecified corrosive waste (pH > 12.5).

7. HANDLING AND STORAGE

Handling: Wear goggles or face shield and a long-sleeved shirt. Contact lenses should not be worn when working with this product. Wash hands thoroughly after handling. Never mix with any acid or any other chemicals. Read and follow all label directions and precautions carefully. Avoid contact with eyes, skin and clothing. Do not take internally.
Storage: Keep containers tightly closed when not in use. Do not store below freezing temperatures. Keep out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Provide sufficient mechanical ventilation to maintain exposure below TLV limit.
Personal Protective Equipment:
Respiratory: If workplace exposure limit is exceeded, a NIOSH-approved respirator is advised in the absence of environmental control.
Eye: Wear approved safety glasses or goggles with unperforated side shields.
Skin: Wear chemically-resistant gloves such as Latex or Neoprene. Wear long sleeves and long pants and apron.
Other: An emergency eyewash station or source of clean potable water should be available in case of accidental eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid pH: 13.00
Solubility in Water: Complete Specific Gravity: 1.385 +/- 0.005

10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Do not mix with any other chemicals.
Incompatibility: Avoid contact with Aluminum, Tin, Zinc.
Hazardous Decomposition Products: Carbon Monoxide, Carbon Dioxide.
11. TOXICOLOGICAL INFORMATION

IARC / NTP / OSHA: This product contains no ingredient at 0.1% or greater that is listed as a human carcinogen.

<table>
<thead>
<tr>
<th>Hazardous Ingredients</th>
<th>CAS Number</th>
<th>LD50</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hydroxide</td>
<td>1310-73-2</td>
<td>40 mg/Kg (oral mouse)</td>
<td>NE</td>
</tr>
<tr>
<td>Polyacrylic Acid</td>
<td>68479-09-4</td>
<td>NE</td>
<td>NE</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Do not discharge to natural waters. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas.

13. DISPOSAL CONSIDERATIONS

Dispose of residue in chemical receptacle in a sanitary landfill. Do not reuse empty containers. Follow All Federal, State and Local Regulations regarding waste disposal. Product as formulated is a DOO2 unspecified corrosive waste (pH > 12.5).

14. TRANSPORT INFORMATION

DOT Shipping Data: CORROSIVE LIQUIDS, N.O.S. (Sodium Hydroxide), 8, UN1760, II

Canadian TDG: Not available for sale in Canada.

15. REGULATORY INFORMATION

TSCA: All chemicals in this product are listed or exempt from listing on the TSCA inventory.

CEPA: All chemicals in this product are listed or exempt from listing on the Canadian DSL/NDSL.

Proposition 65: This product contains no chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

SARA 313: This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR372).

HMIS RATING: Health = 3  Flammability = 0  Reactivity = 1  Personal Protection = C

WHIMS RATING: Not available for sale in Canada.

16. OTHER INFORMATION

NA = Not Available or Not Applicable
NE = Not Established

Read and follow all label directions and precautions before using the product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF THE REACH OF CHILDREN. While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local Laws and regulations.

HEALTH AND SAFETY INFORMATION: (216) 861-7114

Completed On: December 2007  Replaces: September 2007  Completed By: Regulatory Affairs Specialist