Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name: ACS-CWO-100M
Identifier Uses: Cooling Water Treatment.
Supplier: Advanced Chemical Service Inc.
3410 La Sierra Ave. #F271
Riverside, CA 92503
Tel: 800-319-9227
Contact Person: 800-319-9227 / www.advancedchemicalservice.com
Emergency Telephone: 24-HOUR EMERGENCY TELEPHONE: INFOTRAC: 1-800-535-5053
INTERNATIONAL#: 1-352-323-3500

SECTION 2: HAZARDS IDENTIFICATION

Appearance: Pale yellow liquid.
Color: Pale yellow liquid.
Odor: Slightly aromatic.

Pictogram(s):

Signal Word: Warning

Hazard Statements:
- H315 Causes skin irritation.
- H320 Causes eye irritation.
- H336 May cause drowsiness or dizziness.

Precautionary Statements:
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

Contains:
- etidronic acid
- phosphonic acid
- maleic acid
- propan-2-ol isopropyl alcohol isopropanol
- potassium hydroxide

GHS Classification:
- Physical and Chemical Hazards: Not classified
- Human Health: Skin Irrit.2 - H315, Eye Dam. 1 - H318, Skin. Sens 1 - H317, STOT SE 3 - H336
- Environment: Not classified

OSHA Regulatory Status:
- This product is Hazardous under the OSHA Hazard communication Standard.

Inhalation:
- No information is available. Inhalation is not believed to be a likely route of exposure.

Ingestion:
- Exposure to liquid product is not expected to result in significant adverse effects.

Skincontact:
- Exposure to liquid product may be slightly irritating to skin. Symptoms of exposure may...
SECTION 4: FIRST AID MEASURES

**Description of first aid measures**

**General Information**
- General first aid, rest, warmth and fresh air.
- If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. Seek medical attention if symptoms persist.

**Ingestion**
- Exposure to liquid product may cause moderate irritation to eyes. Symptoms of exposure may include redness, swelling, tearing or pain.
- If this product is ingested, drink small amounts of water and seek medical attention if irritation persists.

**Skin contact**
- If this product contacts the skin, immediately flush the affected area with soap and water for at least fifteen (15) minutes. If the product penetrates the clothing, promptly remove the contaminated clothing or shoes, and flush the affected area as described. Seek medical attention if irritation persists.

**Eye contact**
- If this product contacts the eyes, immediately flush eyes with plenty of clean running water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Remove contact lenses if worn. Seek medical attention if irritation persists.

**Most important symptoms and effects, both acute and delayed**

**General Information**
- No information available
- Inhalation: No information is available. Inhalation is not believed to be a likely route of exposure.
- Ingestion: Exposure to liquid product is not expected to result in significant adverse effects.
- Skin contact: Exposure to liquid product may be slightly irritating to skin. Symptoms of exposure may include redness, swelling or pain.
- Eye contact: Exposure to liquid product may cause moderate irritation to eyes. Symptoms of exposure may include redness, swelling, tearing or pain.

**Routes of Exposure**
- No Information available.

**Notes to the Physician**
- This product is irritating to eyes, skin and mucous membranes. This product has low oral toxicity. Treat exposure symptomatically.

SECTION 5: FIREFIGHTING MEASURES

**Auto Ignition Temperature (°C)**
- No Information available

**Flammability Limit-Lower (%)**
- No Information available

**Flammability Limit-Upper (%)**
- No Information available

**Flashpoint**
- No Information available

**Extinguishing Media**
- Use water, foam, dry chemical or carbon dioxide to extinguish fire.

**Hazardous combustion products**
- Combustion may lead to the release of oxides of carbon, possibly toxic phosphines.

**Unusual Fire & Explosion Hazards**
- Dried residue can thermally decompose, giving off irritating and possibly toxic fumes.

**Special Fire Fighting Procedures**
- Use water to cool containers exposed to a fire.

**Protective equipment for fire-fighters**
- Fire fighters should wear full protective equipment, and have self-contained breathing apparatus available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions**
- Use proper personal protection (refer to Section 8).

**Environmental Precautions**
- Run off from fire control or dilution water may cause pollution. Keep out of drains, municipal sewers, open bodies of water and water course.

**Spill Clean Up Methods**
- Safely stop source of spill. Clean up spills immediately. Restrict non-essential personnel from
the area. Wear protective clothing, goggles and respirator if ventilation is not adequate. For small spills, neutralize with baking soda and flush to sewer. For large spills, dike spill area and soak up material with sand or other absorbent. For small spills, neutralize with baking soda and flush to sewer. For large spills, dike spill area and soak up material with sand or other absorbent. Place into chemical waste container for disposal according to local, state or federal regulations. Neutralize residue with lime or soda ash and flush spill area.

SECTION 7: HANDLING AND STORAGE

Handling
Use proper personal protection when handling (refer to Section 8). Use under well-ventilated conditions. Avoid contact with eyes, skin and clothing. Avoid breathing vapors and mists. Avoid prolonged or repeated contact. Do NOT ingest. Wash thoroughly after handling. Rinse container before disposal. Do NOT reuse containers for other purposes.

Usage Description
Use only according to directions.

Storage Precautions
The recommended shelf life is two (2) years. It is recommended that products be retested if stored for more than two (2) years. Under ideal storage conditions, the shelf life is almost indefinite.

Specific End Use(s)
The identified uses are in section 1 of this Safety Data Sheet.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Equipment

<table>
<thead>
<tr>
<th>Component</th>
<th>STD</th>
<th>TWA (8 Hrs)</th>
<th>STEL (15mins)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>propan-2-ol isopropylalcohol</td>
<td>OSHA</td>
<td>400ppm</td>
<td>980mg/m3</td>
<td></td>
</tr>
<tr>
<td>isopropanol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ingredient Comments
OSHA

Process Conditions
Provide eyewash, quick drench.

Engineering Measures
General mechanical ventilation is recommended for enclosed areas.

Respiratory Equipment
Use of respirator protection is not generally required. However, if exposure is above the stated limits or ventilation is inadequate, use a NIOSH approved acid gas/organic vapor respirator to reduce potential for inhalation exposure. When using respirator cartridges, they must be changed frequently to assure breakthrough exposure does not occur.

Hand Protection
Use rubber or plastic gloves to minimize skin contact.

Eye Protection
To avoid contact with eyes, use safety glasses or chemical splash goggles. Face shield is recommended. Eye wash station should be available in the work area.

Hygiene Measures
DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Pale yellow liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Pale yellow liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>Slightly aromatic.</td>
</tr>
<tr>
<td>Odor Threshold - Lower</td>
<td>No Information available.</td>
</tr>
<tr>
<td>Odor Threshold - Upper</td>
<td>No Information available.</td>
</tr>
<tr>
<td>pH-Value, Conc. Solution</td>
<td>2.11</td>
</tr>
</tbody>
</table>
Melting point 32.0 °F
Initial boiling point and boiling range 212.0 °F
Flashpoint No Information available.
Evaporation rate No Information available.
Flammability State No Information available.
Flammability Limit-Lower (%) No Information available.
Flammability Limit-Upper (%) No Information available.
Vapor pressure 23.8 mm Hg 0.0
Vapor Density (air=1) No Information available.
Relative density 9.07 @ 68.0 °F
Bulk Density No Information available.
Solubility Completely soluble in water.
Decomposition temperature No Information available.
Partition coefficient; n-octanol/water No Information available.
Auto Ignition Temperature (°C) No Information available.
Viscosity No Information available.
Explosive Properties No information available.
Oxidizing Properties No Information available.
Molecular Weight No Information available.
Volatile Organic Compound No Information available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity Reactions may occur with strong alkali and oxidizing materials.
Stability This product is stable at ambient temperatures and atmospheric pressures.
Hazardous Polymerization Hazardous polymerization is not expected to occur under normal temperatures and pressures.
Hazardous Decomposition Products Hazardous decomposition will result in the release of oxides of carbon, possibly toxic phosphines.
Conditions to Avoid Avoid contact with strong alkali and oxidizing materials.
Materials to Avoid Keep away from strong alkali and oxidizing materials.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Information No toxicological information for the overall finished product.
Acute Toxicity (Oral LD50) >5770.00mg/kg Rat
Acute Toxicity (Dermal LD50) >1647.00mg/kg Rabbit
Acute Toxicity (Inhalation LC50) No Information available.
Skin Corrosion/Irritation No Information available.
Respiratory Sensitization: No Information available.
Skin Sensitization: No Information available.
Reproductive Toxicity: No Information available.
Germ Cell Mutagenicity: No Information available.
Genotoxicity - In Vitro: No Information available.
Genotoxicity - In Vivo: No Information available.

Carcinogenicity:
- No Information available.
- NTP - Carcinogenicity: The product and its components are not listed.
- OSHA - Carcinogenicity: The product and its components are not listed.
- IARC Carcinogenicity: propan-2-ol isopropyl alcohol isopropanol: 3 IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Specific Target Organ Toxicity - Single Exposure:
- STOT - Single Exposure: No Information available.
Specific Target Organ Toxicity - Repeated Exposure:
- STOT - Repeated Exposure: No Information available.

<table>
<thead>
<tr>
<th>Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzotriazole</td>
<td>675mg/kg Rat</td>
<td>&gt;2000mg/kg Rabbit</td>
<td></td>
</tr>
<tr>
<td>propan-2-ol isopropyl alcohol isopropanol</td>
<td>5480mg/kg Rat</td>
<td>13000mg/kg Rabbit</td>
<td></td>
</tr>
<tr>
<td>potassium hydroxide</td>
<td>284mg/kg Rat</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No Information available.

- Acute Toxicity - Fish: LC50 96 Hours >3900.00ppm Onchorhynchus mykiss (Rainbow Trout)
- Acute Toxicity - Aquatic Invertebrates: LC50 48 Hours >3600.00ppm Daphnia magna
- Acute Toxicity - Aquatic Plants: EC50 72 Hours >2000.00ppm
- Degradability: No information available.
- Bioaccumulative Potential: No data available on bioaccumulation.
- Mobility: Completely soluble in water.

Results of PBT and vPvB Assessment: The product does not contain any PBT or vPvB substances.

Other Adverse Effects: None known.

<table>
<thead>
<tr>
<th>Name</th>
<th>Acute Toxicity (Fish)</th>
<th>Acute Toxicity (Aquatic)</th>
<th>Acute Toxicity (Aquatic Plants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzotriazole</td>
<td>LC50 96 Hours 21.40mg/l Onchorhynchus mykiss (Rainbow Trout)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Management: When handling waste, consideration should be made to the safety precautions applying to handling of the product.

Disposal Methods: Do NOT dump into any sewers, on the ground or into any body of water. Rinse containers before disposal. Since emptied containers contain product residue, follow label warnings even after container is emptied. Dispose in accordance with all applicable federal, state and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

UN No. (DOT/TDG): Not applicable.
### SECTION 15: REGULATORY INFORMATION

**US Federal Regulations**

- **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**
  
  The Following ingredients are listed: maleic acid

- **CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**
  
  The Following ingredients are listed: maleic acid, potassium hydroxide

- **SARA Extremely Hazardous Substances EPCRA Reportable Quantities**
  
  The Following ingredients are listed: maleic acid

- **SARA 313 Emission Reporting**
  
  The Following ingredients are listed: maleic acid, propan-2-ol, isopropyl alcohol, isopropanol

- **CAA Accidental Release Prevention**
  
  The Following ingredients are listed: maleic acid

- **OSHA Highly Hazardous Chemicals**
  
  The Following ingredients are listed: None Listed.

**US State Regulations**

- **California Proposition 65 Carcinogens and Reproductive Toxins**
  
  The Following ingredients are listed: None Listed.

- **California Air Toxics "Hot Spots" (A-I)**
  
  The Following ingredients are listed: None Listed.

- **California Air Toxics "Hot Spots" (A-II)**
  
  The Following ingredients are listed: None Listed.

- **Massachusetts "Right To Know" List**
  
  The Following ingredients are listed: maleic acid, benzotriazole
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide

**Rhode Island “Right To Know” List**
The Following ingredients are listed
maleic acid
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide

**Minnesota “Right To Know” List**
The Following ingredients are listed
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide

**New Jersey “Right To Know” List**
The Following ingredients are listed
phosphonic acid
maleic acid
benzotriazole
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide

**Pennsylvania “Right To Know” List**
The Following ingredients are listed
phosphonic acid
maleic acid
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide
SECTION 16: OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>B</td>
</tr>
</tbody>
</table>

Disclaimer
This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.