SECTION 1—Product Identification

Product Name: ORP Test Solution
Synonyms: 
Part Number: R-508

SECTION 2—Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS #</th>
<th>Percent</th>
<th>Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>85.0</td>
<td>no</td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>7664-93-9</td>
<td>8.0</td>
<td>yes</td>
</tr>
<tr>
<td>Ferric Ammonium Sulfate Dodecahydrate</td>
<td>7783-83-7</td>
<td>4.0</td>
<td>no</td>
</tr>
<tr>
<td>Ferrous Ammonium Sulfate Hexahydrate</td>
<td>7783-85-9</td>
<td>3.0</td>
<td>no</td>
</tr>
</tbody>
</table>

SECTION 3—Hazards Identification

Health Rating: 3
Flammability Rating: 0
Reactivity Rating: 1

Lab Protective Equip: gloves, safety goggles, Lab Coat

SECTION 4—First Aid Measures

INHALATION: Fresh air and normal ventilation. Call a physician if difficulty in breathing persists.

INGESTION: Do not induce vomiting. Give large volumes of milk and water. Call a physician.

SKIN CONTACT: Wash thoroughly with water and soap, call a physician. Apply baking soda if it is readily available.

EYE CONTACT: Immediately flush with water for at least 15 minutes, call a physician.

SECTION 5—Fire Fighting Measures

Fire: Not Combustible
Explosion: The solution is not combustible.
Fire Extinguishing Media: Fight Surrounding Fire
Special Information: N/A

SECTION 6—Accidental Release Measures

Wear protective gloves, goggles and dike area, do not walk in or stand in solution. Dilute spill with more water. Neutralize by covering surface with slaked lime, or sodium bicarbonate (baking soda) add water to form a slurry. Scoop up and flush with excess water. Observe all laws.
SECTION 7-Handling and Storage

Warning! May be harmful if swallowed. May cause severe irritation to skin, eyes, respiratory tract and gastrointestinal tract.

Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Avoid breathing mist.

Store at room temperature in a dry area.

SECTION 8-Exposure Controls/Personal Protection

Airborne Exposure Limits: N/E
Ventilation System: Not Required
Personal Respirators (NIOSH Approved): Not Required
Skin Protection: Rubber Gloves, lab coat (optional)
Eye Protection: Safety Goggles

SECTION 9-Physical and Chemical Properties

Appearance: Clear, colorless liquid
Odor: N/A
Solubility: Miscible
Specific Gravity: 1.0
pH: 0.6
Boiling Point: N/E
Melting Point: N/A
Vapor Density (Air=1): N/A
Vapor Pressure (mm Hg): N/E
Evaporation Rate (BuAc=1): N/E

SECTION 10-Stability and Reactivity

Stability: Stable
Hazardous Decomposition Products: Oxides of sulfur at very high temperatures
Hazardous Polymerization: N/E
Incompatibilities: Organic acids, metals, fulminates
Conditions to Avoid: None

SECTION 11-Toxicological Information:

Routes of absorption: Inhalation, skin, eyes, ingestion
Threshold limit value: Oral rat LD50: 2140 mg/kg (sulfuric acid)
Signs, symptoms and effects of exposure:
   Acute: Irritation of eyes, nose, throat, and skin
   Chronic: May cause burns, erode teeth, cause mouth to become sore; eye, nose & throat inflammation.

SECTION 12-Ecological Information

Environmental Fate:
When released into the soil, this material may leach into groundwater. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material may be removed from the atmosphere to a moderate extent by dry deposition.

Environmental Toxicity:
LC50 Flounder 100 to 330 mg/l/48 hr aerated water/Conditions of bioassay not specified; LC50 Shrimp 80 to 90 mg/l/48 hr aerated water
/Conditions of bioassay not specified; LC50 Prawn 42.5 ppm/48 hr salt water /Conditions of bioassay not specified.
This material may be toxic to aquatic life.

SECTION 13–Disposal Considerations
Material must be stored and disposed of in accordance with all local, state and federal laws. Whatever can not be saved for recovery or neutralized should be sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility.

SECTION 14–Transport Information
Reportable Quantity: 1000 pounds as 100% Sulfuric Acid (per 49 CFR 172.101 appendix)

Domestic (Land, D.O.T.)

Proper Shipping Name: SULFURIC ACID (WITH NOT MORE THAN 51% ACID)
Hazard Class: 8
UN/NA: UN2796
Packing Group: II
Information reported for product/size: 20L

International (Water, I.M.O.)

Proper Shipping Name: SULFURIC ACID (WITH NOT MORE THAN 51% ACID)
Hazard Class: 8
UN/NA: UN2796
Packing Group: II
Information reported for product/size: 20L

SECTION 15–Regulatory Information

Chemical Inventory Status - Part 1

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>TSCA</th>
<th>EC</th>
<th>Japan</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid (7664-93-9)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Chemical Inventory Status - Part 2

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Korea</th>
<th>DSL</th>
<th>NDSL</th>
<th>Phil.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid (7664-93-9)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Federal, State & International Regulations - Part 1

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>-SARA 302-</th>
<th>TPQ</th>
<th>List</th>
<th>Chemical Catg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid (7664-93-9)</td>
<td>1000</td>
<td>1000</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Federal, State & International Regulations - Part 2

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CERCLA</th>
<th>261.33</th>
<th>8(d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid (7664-93-9)</td>
<td>1000</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Chemical Weapons Convention: No
TSCA 12(b): No
CDTA: Yes
SARA 311/312: Acute: Yes  Chronic: Yes  Fire: No  Pressure: No  Reactivity: No
(Pure / Liquid)

Australian Hazchem Code: 2R
Poison Schedule: None allocated.

WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

SECTION 16—Other Information

Label Hazard Warning:
DANGER! CORROSIVE. LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED OR CONTACTED WITH SKIN. HARMFUL IF INHALED. AFFECTS TEETH. CANCER HAZARD. STRONG INORGANIC ACID MISTS CONTAINING SULFURIC ACID CAN CAUSE CANCER. Risk of cancer depends on duration and level of exposure.

NFPA Ratings:    Health:3    Flammability:0    Reactivity:1

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Rosemount Analytical Inc., a Division of Emerson Process Management, provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. ROSEMOUNT ANALYTICAL INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, ROSEMOUNT ANALYTICAL INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.

Prepared by: Rosemount Analytical Inc.
Phone Number: (949) 757-8500