

**MATERIAL SAFETY DATA SHEET**

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**SECTION 1-Product Identification**

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

**SECTION 2-Composition/Information on Ingredients**

Ingredient(s)	CAS #	Percent	Hazardous
Water	7732-18-5	85.0	no
Sulfuric Acid	7664-93-9	8.0	yes
Ferric Ammonium Sulfate Dodecahydrate	7783-83-7	4.0	no
Ferrous Ammonium Sulfate Hexahydrate	7783-85-9	3.0	no

**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.)**

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**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.)**

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**Packing Group:** II  
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**SECTION 15-Regulatory Information**

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Sulfuric Acid (7664-93-9)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----

Ingredient	Korea	DSL	NDSL	Phil.	Canada
Sulfuric Acid (7664-93-9)	Yes	Yes	No	Yes	
Water (7732-18-5)	Yes	Yes	No	Yes	

-----\Federal, State & International Regulations - Part 1\-----

Ingredient	-SARA 302- RQ	TPQ	-----SARA 313----- List	Chemical Catg.
Sulfuric Acid (7664-93-9)	1000	1000	Yes	No
Water (7732-18-5)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8 (d)
Sulfuric Acid (7664-93-9)	1000	No	No
Water (7732-18-5)	No	No	No

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

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