

## SAFETY DATA SHEET


### EC-ORP-PRE (ORP Pretreatment Solution)

Last updated on 28<sup>th</sup> January 2013

#### 1. PRODUCT IDENTIFICATION AND COMPANY INFORMATIONS

Product Name:	ORP Pretreatment Solution
Product Number:	01X081500
Chemical Family:	Mixture of inorganic chemicals
Company Informations:	EUTECH INSTRUMENTS PTE LTD. THERMO FISHER SCIENTIFIC Blk 55, Ayer Rajah Crescent, #04-16/24, Singapore 139949, Website: <a href="http://www.eutechinst.com">http://www.eutechinst.com</a> E-mail: <a href="mailto:eutech@thermofisher.com">eutech@thermofisher.com</a>
Telephone No:	(65) 6778 6876
Fax No:	(65) 6773 0836
Product Use:	Laboratory and Industrial Reagent for analysis

#### 2. HAZARD IDENTIFICATION

GHS Classification	Skin irritation (Category 2) Eye irritation (Category 2)
GHS Label elements: Pictogram Signal word	 Warning
Hazard statement(s): H315; H319	Causes skin irritation; Causes serious eye irritation.
Precautionary statement(s): P264; P280	Wash skin thoroughly after handling; Wear protective gloves/ eye protection/ face protection.

#### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures		
Components:		
CAS: 7664-93-9, EC-No: 231-639-5 Formula: H <sub>2</sub> SO <sub>4</sub>	Sulfuric Acid Skin Corr. Cat 1; Eye Dam. Cat 1; GHS hazard statement: H314	< 6 %
CAS: 7783-85-9, EC-No: 233-151-8	Ferrous Ammonium Sulfate	< 4 %
CAS: 7783-83-7, EC-No: 231-096-4	Ferric Ammonium Sulfate	< 5 %
CAS: 7732-18-5, EC-No: 231-791-2	Deionized water	> 85 %

#### 4. FIRST AID MEASURES

Description of first aid measures:	
General advice:	Consult a physician. Show this safety data sheet to the doctor in attendance.
After inhalation:	Remove to fresh air. Call a physician if breathing becomes difficult.
After skin contact:	Wash off with soap and plenty of water. Call a physician if irritation develops.

After eye contact:	Rinse out with plenty of water for at least 15 minutes. If pain persists, summon medical advice.
After swallowing:	Wash out mouth with plenty of water, provided person is conscious. Obtain medical attention if feeling unwell.
General Information:	Remove contaminated, soaked clothing immediately and dispose of safely.

## 5. FIRE FIGHTING MEASURES

Extinguishing media:	
Suitable extinguishing media:	Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam.
Special hazards arising from the substance or mixture	Development of hazardous combustion gases or vapors possible in the event of fire. Hydrogen may form upon contact with metals (danger of explosion!). The following may develop in event of fire: Sulfur Oxides.
Protective equipment:	Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.
Further information:	Product itself is non-combustible. Cool container with spray water from a safe distance. Contain escaping vapors with water. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental precautions:	Do not discharge into the drains/surface waters/groundwater.
Methods and material for containment and cleaning up:	Soak up with inert absorbent material and dispose of properly. Clean up affected area. Dispose according to local regulation.

## 7. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid generation of vapors/aerosols. Do not inhale substance.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry and well-ventilated place, protected from light.

## 8. EXPOSURE CONTROLS/PERSIONAL PROTECTION

Control parameters:	
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal Protective Equipment:	
Eye/face protection	Safety glasses with side-shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	Handle with chemical resistant gloves made with butyl rubber or nitrile rubber. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's

	outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection:	Impervious clothing. Protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light yellow liquid
Odor:	Odorless
Odour threshold:	No data available
pH-value:	Approximately 1
Boiling point (deg C):	Approximately 100
Melting point (deg C):	Not applicable
Flash point:	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Lower Explosion limits:	No data available
Upper Explosion limits:	No data available
Vapour pressure	No data available
Vapour density	No data available
Specific gravity:	1.0-1.03 g/cm <sup>3</sup>
Water solubility	Soluble
Partition coefficient: octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	Not applicable
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Other information	No further relevant information available

## 10. STABILITY AND REACTIVITY

Reactivity	No data available.
Chemical stability	Stable under standard ambient conditions
Possibility of hazardous reactions	Highly reactive with combustible materials, alkalis.
Conditions to avoid	Heating
Incompatible materials	Strong acids, Strong oxidizing agents
Hazardous decomposition products	No data available

## 11. TOXICOLOGICAL INFORMATION

Product toxicity	No data available
Potential Health Effects:	
Inhalation:	May harmful if inhaled. May cause respiratory tract irritation

Skin Contact:	May cause skin irritations.
Eye Contact:	May cause eye irritations.
Ingestion:	Harmful if swallowed.
Specific target organ toxicity-single exposure:	No data available
Specific target organ toxicity-repeated exposure:	No data available
Signs and Symptoms of Exposure:	Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

Toxicity:	No data available
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	No data available
Other adverse effects	No further relevant information available.
Additional ecological information:	No ecological problems are to be expected when the product is handled and used with due care and attention.

## 13. DISPOSAL CONSIDERATION

Waste disposal:	Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice. Handle contaminated packaging in the same way as the substance itself.
Contaminated packaging	Dispose of as unused product.
Recommended cleaning agent:	Water.

## 14. TRANSPORT INFORMATION

UN-Number ADR/RID, IMDG, IATA	3264
UN proper shipping name · ADR/RID, IMDG, IATA	Corrosive liquid, acidic, inorganic,
Transport hazard class(es) ADR, IMDG, IATA	8
Packing group ADR, IMDG, IATA	III
Environmental hazards- Marine pollutant:	No
Special precautions for user:	No data available

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation According to Regulation (EC) No. 1272/2008 and GHS system.
---

Chemical safety assessment:	No data available
-----------------------------	-------------------

**16. OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Company will not be held liable for any damage resulting from handling or from contact with the above product.

## Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

## Relevant phrase:

H314: Causes severe skin burns and eye damage.

Skin Corr.: Skin corrosion

Eye Dam. Serious eye damage

Copyright © 2013 Eutech Instruments Pte Ltd. [eutech@thermofisher.com](mailto:eutech@thermofisher.com)