



# Safety Data Sheet

According to Regulation (EC) No. 1907/2006  
OSHA Regulation 29 CFR 1910.1200  
Canadian Regulation SOR/88-66

Revision Date: 2012-06-01  
Reason for Revision: Reviewed Only

## **SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY**

**Product Name:** HI 7091 Reducing Pretreatment Solution

**Additional Product Codes:** HI 7091L  
HI 7091M

**Application:** Maintenance Solution for ORP Electrodes

**Company Information (USA):**

Hanna Instruments, Inc.  
584 Park East Dr, Woonsocket, Rhode Island, USA 02895

**Technical Service Contact Information:**

1-800-426-6287 (8:30AM - 5:00PM ET)  
+1-401-766-4260 (8:30AM - 5:00PM ET)

**USA Emergency Contact Information:**

1-800-424-9300 (Chemtrec 24Hr. Emergency)

**International Emergency Contact Information:**

+1-703-527-3887 (Chemtrec 24Hr. Emergency)

**E-mail Address:**

tech@hannainst.com

## **SECTION 2: HAZARD IDENTIFICATION**

Non-hazardous product as specified in Directives 67/548/EEC and 1999/45/EC.  
Non-hazardous product as specified in OSHA Regulation 29 CFR 1910.1200.  
Non-hazardous product as specified in Canadian Regulation SOR/88-66.

## **SECTION 3: COMPOSITION AND COMPONENT INFORMATION**

**Component:** Iron (II) Sulfate Heptahydrate

**EC-No.:** 231-753-5

**CAS-No.:** 7782-63-0

**Hazard:** Xn

**Phrases:** R: 22

**Content:** > 1% - < 10%

## **SECTION 4: FIRST AID MEASURES**

**After Inhalation:** Remove to fresh air. Call a physician if breathing becomes difficult.

**After Skin Contact:** Wash affected area with water and soap.

**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.

## **SECTION 5: FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media:**

Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam.

**Special Risks:**

Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in event of fire: Sulfur Oxides

**Special Protective Equipment:**

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

**Additional Information:**

Product itself is non-combustible. Cool container with spray water from a safe distance. Contain escaping vapors with water.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:**

Take up with liquid-absorbent material. Clean up affected area and dispose according to local regulation.

**Environmental Precautions:**

Do not discharge into the drains/surface waters/groundwater.

**Additional Notes:**

Render harmless: neutralize with diluted sodium hydroxide solution or by throwing on lime, lime sand, or sodium carbonate.

**SECTION 7: HANDLING AND STORAGE**

**Handling:**

Avoid generation of vapors/aerosols. Do not inhale substance.

**Storage:**

Tightly closed. In a well-ventilated place at +15 to +25 °C, protected from light.

**SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION**

**Engineering:**

Maintain general industrial hygiene practice.

**Personal Protective Equipment:**

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

**Respiratory Protection:**

Required when vapors/aerosols are generated.

**Protective Gloves:**

Rubber or plastic

**Eye Protection:**

Goggles or face mask

**Industrial Hygiene:**

Change contaminated clothing. Wash hands after working with substance.

**SECTION 9: PHYSICAL/CHEMICAL PROPERTIES**

<b>Appearance:</b>	Light green liquid	<b>Odor:</b>	Odorless	<b>Density at 20°C:</b>	1.02 g/cm <sup>3</sup>
<b>Melting Point:</b>	ND	<b>Boiling Point:</b>	ND	<b>Solubility:</b>	Soluble
<b>pH at 20°C:</b>	< 2	<b>Explosion Limit:</b>	NA	<b>Flash Point:</b>	NA
<b>Thermal Decomp.:</b>	ND				

**SECTION 10: STABILITY AND REACTIVITY**

**Conditions to be Avoided:**

Heating

**Hazardous Polymerization:**

Will not occur.

**Further Information:**

Not available

**Hazardous Decomposition Products:**

In the event of fire: See section 5.

**Substances to be Avoided:**

Strong alkalis/bases

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### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### **Product Toxicity**

Quantitative data on the toxicity of this product is not available.

#### **Potential Health Effects:**

- Skin Contact:** Slight irritation under certain circumstances repeated skin contact may cause dermatitis or may cause irritative symptoms.
- Eye Contact:** Intensive exposure may cause irritative symptoms.
- Ingestion:** After swallowing of large amounts: bloody vomiting, diarrhoea, drop in blood pressure.
- Further Data:** The previous applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys. Further hazardous properties cannot be excluded. The product should be handled with the usual care when dealing with chemicals.

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#### **Component Toxicity**

##### **Acute Toxicity:**

Not Available

##### **Chronic Toxicity:**

Not Available

#### **Additional Data:**

APPLICABLE TO MAIN COMPONENT:

The following applies to Iron (II) Sulphate Heptahydrate, as the pure substance:

Acute toxicity

LD50 (oral, rat): 319 mg/kg (anhydrous substance).

Subacute to chronic toxicity

Sensitization:

In animal experiments: No sensitizing effect.

Bacterial mutagenicity: Ames test: negative.

### **SECTION 12: ECOLOGICAL INFORMATION**

Quantitative data on the toxicity of this product is not available.

APPLICABLE TO MAIN COMPONENT:

The following applies to Iron (II) Sulphate Heptahydrate, as the pure substance:

Biologic degradation:

Methods for the determination of biodegradability are not applicable to inorganic substances.

Ecotoxic effects:

Biological effects:

Fish toxicity: *P. reticulata* LC50: 925 mg/L /96 h.

Daphnia toxicity: *Daphnia magna* EC50: 152 mg/L /48 h (anhydrous substance).

Bacterial toxicity: *Pseudomonas fluorescens* EC0: 100 mg/L /24 h (anhydrous substance).

Further ecologic data:

The following applies to dissolved iron compounds in general: fish: toxic as from 0.9 mg/L at pH 6.5-7.5; lethal as from 1 mg/L at pH 5.5-6.7; 50 mg/L iron upper limit for fish life.

When iron ions flocculate in an alkaline medium, mechanical damage occurs in aquatic organisms.

**Further Data:** Do not allow to enter waters, waste waters, or soil!

### **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal:** Can be safely disposed of as ordinary refuse.

### **SECTION 14: TRANSPORTATION INFORMATION**

#### **Land:**

Not subject to transport regulations

#### **Sea:**

Not subject to transport regulations

#### **Air:**

Not subject to transport regulations

### **SECTION 15: REGULATORY INFORMATION**

#### **Labeling according to EC Directives:**

Non-hazardous according to Directives 67/548/EEC and 1999/45/EC.



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## **SECTION 16: OTHER INFORMATION**

### ***Text of R-phrases under Section 3***

22: Harmful if swallowed

### ***Revision Information***

**Revision Date:** 2012-06-01

**Supersedes edition of:** 2009-06-10

**Reason for revision:** Reviewed Only

### ***Legend***

NA: Not Applicable

ND: Not Determined

**THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF THE PROPERTIES OF THE PRODUCT.**