



Safety Data Sheet

According to Regulation (EC) No. 1907/2006

Revision Date: 2008-12-01

Reason for Revision: REACH Compliance and General Update

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.

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 effected 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.

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**Ingredients:**

UK
Name: Iron Salts (as Fe)
Type: LTEL
Value: 1 mg/m³

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

Appearance: Light green liquid

Odor: Odorless

Density at 20° C: 1.02 g/cm³

Melting Point: ND

Boiling Point: ND

Solubility: Soluble

pH at 20° C: < 2

Explosion Limit: NA

Flash Point: NA

Thermal Decomp.: 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

SECTION 11: TOXICOLOGICAL 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:

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.

In Case of Inhalation:

In Case of Skin Contact: Slight irritation under certain circumstances repeated skin contact may cause dermatitis or may cause irritative symptoms.

In Case of Eye Contact: Intensive exposure may cause irritative symptoms.

In Case of 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. Property of this product must be anticipated on the basis from the components of the preparation:

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:****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:**

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

R-phrases:**S-phrases:****Contains:**

SECTION 16: OTHER INFORMATION***Text of R-phrases under Section 3***

22: Harmful if swallowed

Revision Information**Revision Date:** 2008-12-01**Supersedes edition of:** 2008-01-18**Reason for revision:** REACH Compliance and General Update***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.