

**Revision Date:** 2011-07-14  
**Reason for Revision:** (1st edition)

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

**Product Name:** HI 7581 Calcium Reagent A

**Additional Product Codes:** HI 758-26

**Application:** Determination of Calcium in Seawater Samples

**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**

Causes skin irritation. Causes serious eye irritation. May damage fertility or the unborn child.

**According to Regulation (EC) No. 1272/2008:**

**Classification:** Skin Irritation (Category 2)  
Eye Irritation (Category 2)  
Reproductive Toxicity (Category 1B)

**Signal Word:** **Danger**

**Pictograms:**



**Hazard Statements:** H315: Causes skin irritation.  
H319: Causes eye irritation.  
H360: May damage fertility or the unborn child.

**Precaution Statements:** P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.  
P308+P313: IF exposed or concerned: Get medical advice/attention.

**According to Directives 67/548/EEC and 1999/45/EC:**

**Symbol:** T: Toxic

**R-phrases:** 36-38-60-52/53-61: Irritating to eyes. Irritating to skin. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May impair fertility. May cause harm to the unborn child.

**S-phrases:** 24/25-26-39-46: Avoid any inhalation, contact with skin and eyes. Wear suitable protective clothing and gloves. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection. If swallowed, seek medical advice immediately and show this container or label.

**SECTION 3: COMPOSITION AND COMPONENT INFORMATION**

<b>Component:</b>	<b>EC No:</b>	<b>CAS No:</b>	<b>Hazard Class:</b>	<b>Phrases:</b>	<b>Concentration:</b>
Sodium tetraborate decahydrate	215-540-4	1303-96-4	Repr. 1B T	H360 R: 60-61	> 1% - < 5%
Zinc sulphate heptahydrate	231-793-3	7446-20-0	Acute Tox. 4 Eye Dam. 1 Aquatic Acute 1 Aquatic Chronic 1 Xn, N	H302, H318, H410 R: 22-41-50/53	> 0.1% - < 1.0%
Sodium hydroxide	215-185-5	1310-73-2	Skin Corr. 1A C	H314 R: 35	> 0.5% - < 2.0%

**SECTION 4: FIRST AID MEASURES**

<b>After Inhalation:</b>	Remove to fresh air. If breathing becomes difficult, call a physician.
<b>After Skin Contact:</b>	Wash affected area with water and soap. Remove contaminated clothing.
<b>After Eye Contact:</b>	Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
<b>After Swallowing:</b>	Wash out mouth with plenty of water, provided person is conscious. Do not induce vomiting. Seek medical advice.
<b>General Information:</b>	Not available

**SECTION 5: FIRE-FIGHTING MEASURES**

<b>Suitable Extinguishing Media:</b>	Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam
<b>Special Risks:</b>	May evolve toxic fumes in fire.
<b>Special Protective Equipment:</b>	Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus. Prevent contact with skin and eyes.
<b>Additional Information:</b>	NA

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions:</b>	Wear appropriate protective clothing.
<b>Environmental Precautions:</b>	Do not discharge into drains, surface waters, or groundwaters.
<b>Additional Notes:</b>	Take up with liquid-absorbent material. Clean up affected area and dispose according to local regulation.

**SECTION 7: HANDLING AND STORAGE**

<b>Handling:</b>	<b>Storage:</b>
Avoid generation of vapors/aerosols.	Store at room temperature (15 to 25°C). Protect from direct sunlight and moisture. Keep container tightly closed. Keep away from children.

## Safety Data Sheet

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

### SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	Value	Source	Type	Value	Source
<b>Sodium Hydroxide</b>					
Ceiling	2 mg/m <sup>3</sup>	Belgium	Ceiling	2 mg/m <sup>3</sup>	Canada (Ontario)
Ceiling	2 mg/m <sup>3</sup>	Canada (Quebec)	TWA (8hr)	2 mg/m <sup>3</sup>	France
TWA (8hr)	2 mg/m <sup>3</sup>	Greece	TWA (8hr)	2 mg/m <sup>3</sup>	Hungary
TWA (8hr)	0.5 mg/m <sup>3</sup>	Poland	Ceiling	2 mg/m <sup>3</sup>	Portugal
TWA (8hr)	1 mg/m <sup>3</sup>	Romania	Ceiling	2 mg/m <sup>3</sup>	Spain
TWA (15min)	2 mg/m <sup>3</sup>	UK	Ceiling	2 mg/m <sup>3</sup>	USA (ACGIH)
TWA (8hr)	2 mg/m <sup>3</sup>	USA (OSHA)			
<b>Sodium Tetraborate Decahydrate</b>					
TWA (8hr)	2 mg (borate)/m <sup>3</sup>	Belgium	TWA (8hr)	2 mg borate/m <sup>3</sup>	Canada (Ontario)
TWA (8hr)	5 mg/m <sup>3</sup>	Canada (Quebec)	TWA (8hr)	5 mg/m <sup>3</sup>	France
TWA (8hr)	0.5 mg (borate)/m <sup>3</sup>	Germany	TWA (8hr)	10 mg/m <sup>3</sup>	Greece
TWA (8hr)	2 mg (borate)/m <sup>3</sup>	Portugal	TWA (8hr)	5 mg/m <sup>3</sup>	Spain
TWA (8hr)	5 mg/m <sup>3</sup>	UK			

**Engineering:**

Maintain general industrial hygiene practice.

**Personal Protective Equipment:**

Not required

**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>	Colorless liquid	<b>Odor:</b>	Odorless	<b>Density at 20 °C:</b>	ND
<b>Melting Point:</b>	0 °C	<b>Boiling Point:</b>	100 °C	<b>Solubility:</b>	Soluble
<b>pH at 20 °C:</b>	10	<b>Explosion Limit:</b>	NA	<b>Flash Point:</b>	NA
<b>Thermal Decomp.:</b>	NA				

### SECTION 10: STABILITY AND REACTIVITY

**Conditions to be Avoided:**

Heating

**Hazardous Polymerization:**

Will not occur

**Further Information:**

Not available

**Hazardous Decomposition Products:**

Sulfur oxides, zinc oxide, boron. In the event of fire: See section 5.

**Substances to be Avoided:**

Strong acids. The generally known reaction partners of water.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **Product Toxicity**

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

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

**Inhalation:** May cause respiratory tract irritation.

**Skin Contact:** May cause irritation.

**Eye Contact:** May cause severe irritation.

**Ingestion:** Irritations of mucous membranes in the mouth, pharynx, esophagus and gastrointestinal tract.

**Further Data:** Hazardous properties cannot be excluded, but are relatively unlikely because of the low concentration of the dissolved substances, when the product is handled appropriately. The product should be handled with the usual care when dealing with chemicals.

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### **Component Toxicity**

#### **Acute Toxicity:**

#### **Chronic Toxicity:**

Not Available

#### **Sodium Tetraborate Decahydrate**

**LD50:** Oral - Rat - 4500 mg/kg

**LD50:** Dermal - Rabbit - 10000 mg/kg

#### **Additional Data:**

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Sodium Hydroxide, as the pure substance:

Acute toxicity:

LD50 Intraperitoneal, mouse: 40 mg/kg

Irritation data

Skin, Rabbit: 500 mg /24 hr

Remarks: Severe irritation effect. Eyes, Rabbit: 0.5 mg / 24 hr

Remarks: Severe irritation effect.

Signs and symptoms of exposure:

Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

## **SECTION 12: ECOLOGICAL INFORMATION**

Quantitative data on the ecological effect of this product is not available.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Zinc Sulfate – as the pure substance:

Ecotoxicity:

LC50 Daphnia magna (Water flea) 690 ug/L/48 hr.

LC50 Labeo rohita (fresh water fish) 65 mg/L/96 hr.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Sodium hydroxide – as the pure substance

Biologic degradation:

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

Behavior in environmental compartments:

Concentration in organisms is not to be expected.

Ecotoxic effects:

Biological effects:

Harmful effect on aquatic organisms. Toxic effect on fish and plankton. Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. Does not cause biological oxygen deficit.

Neutralization possible in waste water treatment plants.

Fish toxicity: Onchorhynchus mykiss LC50: 45.4 mg/L /96 h (in hard water). L.macrochirus LC50: 99 mg/L /48h.

Daphnia toxicity: Daphnia magna EC50: 76 mg/L /24 h.

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

**SECTION 13: DISPOSAL CONSIDERATIONS**

**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.

**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**

Complies with European Regulations (EC) No. 1907/2006 and No. 1272/2008.  
Complies with European Council Directives 67/548/EEC and 1999/45/EC.  
Complies with OSHA Regulation 29 CFR 1910.1200.  
Complies with Canadian Regulation SOR/88-66

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

R22: Harmful if swallowed.  
R35: Causes severe burns.  
R41: Risk of serious damage to eyes.  
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R60: May impair fertility.  
R61: May cause harm to the unborn child.  
H302: Harmful if swallowed.  
H314: Causes severe skin burns and eye damage.  
H318: Causes serious eye damage.  
H360: May damage fertility or the unborn child.  
H410: Very toxic to aquatic life with long lasting effects.

**Revision Information****Revision Date:** 2011-07-14**Supersedes edition of:** (1st edition)**Reason for revision:** (1st edition)**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.**