

# Safety Data Sheet

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

**Revision Date:** 2012-05-22  
**Reason for Revision:** Section 14 Updated

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

**Product Name:** HI 38000B-0 Sulfate Reagent B

**Application:** Determination of Sulfate in Water 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**

Harmful by inhalation. Toxic if swallowed.

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

**Classification:** Acute Toxicity, Oral (Category 3)  
Acute Toxicity, Inhalation (Category 4)

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

**Pictograms:**



**Hazard Statements:** H301: Toxic if swallowed.  
H332: Harmful if inhaled.

**Precaution Statements:** P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

**Symbol:** T: Toxic

**R-phrases:** 20-25: Harmful by inhalation. Toxic if swallowed.

**S-phrases:** 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## **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>
Barium chloride dihydrate	233-788-1	10326-27-9	Acute Tox. 3 Acute Tox. 4	H301, H332 R: 20-25	-

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

**After Inhalation:** Remove to fresh air. Give artificial respiration if victim is not breathing. Give oxygen if breathing is difficult.

**After Skin Contact:** Flush affected area with copious amounts of water for at least 15 minutes. Remove contaminated clothing.

**After Eye Contact:** Rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

**After Swallowing:** Make victim drink plenty of water, induce vomiting. Immediately call in physician. Subsequently administer: Sodium sulfate (1 tablespoon/1/4 l water).

**General Information:** Not available

# Safety Data Sheet

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

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

### **Suitable Extinguishing Media:**

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

### **Special Risks:**

Non-combustible. Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in event of fire:  
Hydrochloric Acid

### **Special Protective Equipment:**

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

### **Additional Information:**

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions:**

Avoid substance contact. Avoid generation of dusts. Ensure supply of fresh air in enclosed rooms.

### **Environmental Precautions:**

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

### **Additional Notes:**

Take up dry. Clean up affected area and dispose according to local regulation.

## **SECTION 7: HANDLING AND STORAGE**

### **Handling:**

No further requirements.

### **Storage:**

Store tightly closed. Accessible only for authorized persons.

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

Type	Value	Source	Type	Value	Source
<b>Barium Chloride Dihydrate</b>					
TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Belgium	TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Canada (Ontario)
TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Canada (Quebec)	TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	France
TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Germany	TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Greece
TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Hungary	TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Italy
TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Netherlands	TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Portugal
TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Romania	TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	Spain
TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	UK	TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	USA (ACGIH)
TWA (8hr)	0.5 mg (Ba)/m <sup>3</sup>	USA (OSHA)			

### **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. The resistance of the protective clothing to chemicals should be determined with the respective supplier.

### **Respiratory Protection:**

Required when dusts are generated.

### **Protective Gloves:**

Compatible chemical-resistant gloves

### **Eye Protection:**

Goggles or face mask

### **Industrial Hygiene:**

Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance. Under no circumstances eat or drink at workplace. Work under hood. Do not inhale substance.

## Safety Data Sheet

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

**SECTION 9: PHYSICAL/CHEMICAL PROPERTIES**

<b>Appearance:</b> White powder	<b>Odor:</b> Odorless	<b>Density at 20°C:</b> 3.86 g/cm <sup>3</sup> (25°C)
<b>Melting Point:</b> 963 °C	<b>Boiling Point:</b> ND	<b>Solubility:</b> 375 g/L (anhydrous substance)
<b>pH at 20°C:</b> 5.2-8.2 (25°C)	<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:**

Toxic gases: See section 5.

**Substances to be Avoided:**

Strong oxidizing agents, strong reducing agents

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Product Toxicity**

The following applies to Barium Chloride – as the pure substance:

Acute toxicity

LD50 (oral, rat): 118 mg/Kg – calculated on the pure anhydrous substance (IUCLID).

Subacute to chronic toxicity

Mutagenicity (mammal cell test): negative. (in vitro) (IUCLID).

Bacterial mutagenicity: Ames test: negative (IUCLID).

**Potential Health Effects:**

**Inhalation:** Irritations of the mucous membranes, coughing, and dyspnoea.

**Skin Contact:** Irritations.

**Ingestion:** May be harmful if swallowed. The following applies to soluble barium compounds in general: after swallowing: mucosal irritation, nausea, salivation, vomiting, dizziness, pain, colics, and diarrhoea. Systemic effects include: cardiac dysrhythmias, bradycardia (subdued cardiac activity), rise in blood pressure, shock and circulatory collapse as well as muscular rigidity.

**Further Data:** Further hazardous properties cannot be excluded. The product should be handled with the usual care when dealing with chemicals.

**Component Toxicity**

**Acute Toxicity:**

**Chronic Toxicity:**

Not Available

**Barium Chloride Dihydrate**

**LD50:** Oral - Rat - 118 mg/kg (anhydrous)

**LD50:** Oral - Guinea Pig - 76 mg/kg (anhydrous)

**Additional Data:**

Not Available

# Safety Data Sheet

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

## **SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicological effects  
Biological effects:  
Endangers drinking-water supplies if allowed to enter soil or water. Formation of health-hazardous mixtures possible with water.  
Fish toxicity: L.idus LC50: 870 mg/L /48 h (anhydrous substance) (IUCLID).  
Daphnia toxicity: Daphnia magna EC50: 21.9 mg/L /48 h (anhydrous substance) (IUCLID).  
Biologic degradation:  
Methods for the determination of biodegradability are not applicable to inorganic substances.

**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**

	<b>Land (ADR/RID):</b>	<b>Sea (IMDG):</b>	<b>Air (ICAO/IATA):</b>
<b>UN No.:</b>	1564	1564	1564
<b>Proper Shipping Name:</b>	Barium compound, n.o.s. (Barium chloride dihydrate)	Barium compound, n.o.s. (Barium chloride dihydrate)	Barium compound, n.o.s. (Barium chloride dihydrate)
<b>Class (Sub Risk):</b>	6.1	6.1	6.1
<b>Packing Group:</b>	III	III	III

## **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**

R20: Harmful by inhalation.  
R25: Toxic if swallowed.  
H301: Toxic if swallowed.  
H332: Harmful if inhaled.

### **Revision Information**

**Revision Date:** 2012-05-22  
**Supersedes edition of:** 2010-12-01  
**Reason for revision:** Section 14 Updated

**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.**