

**Revision Date:** 2010-12-01  
**Reason for Revision:** Regulation (EC) No. 1272/2008 Compliance

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

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

**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**

Irritating to respiratory system and skin. Risk of serious damage to eyes.

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

**Classification:** Skin Irritation (Category 2)  
Eye Damage (Category 1)

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

**Pictograms:**



**Hazard Statements:** H315: Causes skin irritation.

H318: Causes serious eye damage.

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

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:** Xi: Irritant

**R-phrases:** 38-41: Irritating to skin. Risk of serious damage to eyes.

**S-phrases:** 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**SECTION 3: COMPOSITION AND COMPONENT INFORMATION**

Component:	EC No:	CAS No:	Hazard Class:	Phrases:	Concentration:
Citric acid	201-069-1	77-92-9	Skin Irrit. 2 Eye Dam. 1 Xi	H315, H318 R: 38-41	-

**SECTION 4: FIRST AID MEASURES**

**After Inhalation:** Remove to fresh air.

**After Skin Contact:** Wash affected area with plenty of water. Remove contaminated clothing.

**After Eye Contact:** Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**After Swallowing:** Immediately make victim drink plenty of water. Call in physician.

**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 followings may develop in the event of fire: Carbon Monoxide, Carbon Dioxide

### **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. Do not inhale 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:**

Avoid generation of dusts. Do not inhale substance.  
Accessible only for authorized persons

### **Storage:**

Store at room temperature (+15 to +25 °C). Tightly closed. Protect from light and moisture and from solvents.

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

### **Engineering:**

Maintain general industrial hygiene practice.

### **Personal Protective Equipment:**

As appropriate to quantity handled.

### **Respiratory Protection:**

Required when dusts are generated.

### **Protective Gloves:**

Compatible chemical-resistant gloves.

### **Eye Protection:**

Goggles or face mask

### **Industrial Hygiene:**

Wash thoroughly after handling.

## **SECTION 9: PHYSICAL/CHEMICAL PROPERTIES**

**Appearance:** White powder

**Odor:** Odorless

**Density at 20 °C:** ND

**Melting Point:** 153 °C

**Boiling Point:** NA

**Solubility:** 1330 g/L

**pH at 20 °C:** 2.1 @ 10 g/L

**Explosion Limit:** NA

**Flash Point:** NA

**Thermal Decomp.:** NA

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### **SECTION 10: STABILITY AND REACTIVITY**

**Conditions to be Avoided:**

Strong Heating

**Hazardous Polymerization:**

Will not occur.

**Further Information:**

Not available

**Hazardous Decomposition Products:**

Toxic gases: See section 5.

**Substances to be Avoided:**

Metals, oxidizing agent, bases, reducing agents.

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

**Product Toxicity**

Acute toxicity

LD50, oral, rat: 3000 mg/Kg – calculated on the pure substance. (RTECS).

Specific symptoms in animal studies:

Eye irritation test (rabbit): Severe irritations (Lit.).

Skin irritation test (rabbit): Slight irritations (Lit.).

Subacute to chronic toxicity

Bacterial mutagenicity: Ames test: negative (Lit.).

No teratogenic effect in animal experiments (Lit.).

No impairment of reproductive performance in animal experiments (Lit.).

**Potential Health Effects:**

**Inhalation:** Irritation symptoms in the respiratory tract.

**Skin Contact:** Slight irritations.

**Eye Contact:** Slight irritations.

**Ingestion:** Irritation of: mucous membranes (stomach); coughing, pain, bloody vomiting.

**Further Data:** 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:**

Not Available

**Safety Data Sheet**According to Regulation (EC) No. 1907/2006  
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Biologic degradation:  
Biodegradation: 98 % /2 d (OECD 302 B) (IUCLID).  
Easily eliminable.  
Behaviour in environmental compartments:  
Distribution: log Pow: -1.72 (20 °C) (IUCLID).  
No bioaccumulation is to be expected (log Pow <1).  
Ecotoxic effects  
Biological effects: Harmful effect due to pH shift.  
Fish toxicity: L.idus LC50: 440-760 mg/L /96 h (IUCLID).  
Daphnia toxicity: Daphnia magna EC50: ~120 mg/L /72 h (IUCLID).  
Maximum permissible toxic concentration:  
Protozoa: E.sulcatum EC5: 485 mg/L /72 h (Lit.).  
Bacterial toxicity: Ps.putida EC5: >10000 mg/L /16 h (Lit.). M.aeruginosa EC5: 80 mg/L /8 d (Lit.).  
Algal toxicity: Sc.quadricauda IC5: 640 mg/L /7 d (Lit.).  
Behavior in environmental compartments:  
Distribution: log p(o/w): -1.72 (20 °C); No bioaccumulation is to be expected (log P(o/w) <1).  
Further ecologic data:  
Degradability:  
BOD5: 0.526 g/g (Lit.).  
TOD: 0.75 g/g (calculated).  
COD: 0.728 g/g (Lit.).

**Further Data:** Degradability:  
BOD5: 0.526 g/g;  
TOD: 0.75 g/g;  
COD: 0.728 g/g.

**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:**ADR/RID:9, PGIII  
UN-N:3316  
Name:CHEMICAL KIT**Sea:**IMDG:9/UN 3316/PGIII  
Name:CHEMICAL KIT**Air:**ICAO/IATA:9/UN 3316/PGIII  
Name:CHEMICAL KIT

Transport data applies to the COMPLETE KIT!

**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

**Safety Data Sheet**According to Regulation (EC) No. 1907/2006  
OSHA Regulation 29 CFR 1910.1200  
Canadian Regulation SOR/88-66**SECTION 16: OTHER INFORMATION*****Text of phrases under Section 3***

R38: Irritating to skin.  
R41: Risk of serious damage to eyes.  
H315: Causes skin irritation.  
H318: Causes serious eye damage.

***Revision Information***

**Revision Date:** 2010-12-01  
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**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.**