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**HI 93705A/67**  
**Silica Reagent A**

# Safety Data Sheet

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

**Revision Date:** 2009-06-10

**Reason for Revision:** 29 CFR 1910.1200 and SOR/88-66 Compliance

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

**Product Name:** HI 38067A-0 Silica Reagent A

**Additional Product Codes:** HI 38067A-0

**Application:** Determination of Silica 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 eyes and skin.

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

<b>Component:</b>	Sulfuric Acid	Sodium Bisulfate Monohydrate	Ammonium Dimolybdate
<b>EC-No.:</b>	231-639-5	231-665-7	231-970-5
<b>CAS-No.:</b>	7664-93-9	10034-88-5	7782-91-4
<b>Hazard:</b>	C	Xi	Xn
<b>Phrases:</b>	R: 35	R: 41	R: 36/37-48-20/22
<b>Content:</b>	> 5% - < 15%	> 1% - < 10%	> 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. Hydrogen may form upon contact with metals (danger of explosion!). 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. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

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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. Accessible only for authorized persons.

## SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	Value	Source	Type	Value	Source
<b>Ammonium Molybdate Tetrahydrate</b>					
TWA (8hr)	0.5 mg (Mo)/m <sup>3</sup>	Canada (Ontario)	TWA (8hr)	0.2 mg (Mn)/m <sup>3</sup>	Canada (Ontario)
TWA (8hr)	5 mg (Mo)/m <sup>3</sup>	Canada (Quebec)	TWA (8hr)	5 mg (Mo)/m <sup>3</sup>	Hungary
TWA (8hr)	4 mg (Mo)/m <sup>3</sup>	Poland	TWA (8hr)	2 mg (Mo)/m <sup>3</sup>	Romania
TWA (8hr)	0.5 mg (Mo)/m <sup>3</sup>	USA (ACGIH)	TWA (8hr)	5 mg (Mo)/m <sup>3</sup>	USA (OSHA)
<b>Sulfuric Acid</b>					
TWA (8hr)	1 mg/m <sup>3</sup>	Belgium	TWA (8hr)	0.2 mg/m <sup>3</sup>	Canada (Ontario)
TWA (8hr)	1 mg/m <sup>3</sup>	Canada (Quebec)	TWA (8hr)	1 mg/m <sup>3</sup>	France
TWA (8hr)	1 mg/m <sup>3</sup>	Greece	TWA (8hr)	1 mg/m <sup>3</sup>	Hungary
TWA (8hr)	0.5 mg/m <sup>3</sup>	Poland	TWA (8hr)	0.2 mg/m <sup>3</sup>	Portugal
TWA (8hr)	0.5 mg/m <sup>3</sup>	Romania	TWA (8hr)	1 mg/m <sup>3</sup>	Spain
TWA (8hr)	0.2 mg/m <sup>3</sup>	USA (ACGIH)	TWA (8hr)	1 mg/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.

### 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.

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<b>Appearance:</b>	Colorless liquid	<b>Odor:</b>	Odorless	<b>Density at 20° C:</b>	1.21 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>	~ 1	<b>Explosion Limit:</b>	NA	<b>Flash Point:</b>	NA
<b>Thermal Decomp.:</b>	ND				

**SECTION 10: STABILITY AND REACTIVITY****Conditions to be Avoided:**

Strong Heating

**Hazardous Polymerization:**

Will not occur.

**Further Information:**

Has a corrosive effect. Incompatible with metals, animal and vegetable tissues.

**Hazardous Decomposition Products:**

In the event of fire: See section 5.

**Substances to be Avoided:**

Alkali metals, alkali compounds, ammonia, alkaline earth compounds, alkalis, acids, alkaline earth metals, metals, metal alloys, permanganates, combustible substances, organic solvents, halogenates

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

**Potential Health Effects:**

- Inhalation:** Irritative symptoms in the respiratory tract.
- Skin Contact:** Severe irritations.
- Eye Contact:** Corneal destruction.
- Ingestion:** Damage to the oral, esophageal, and gastric mucous membranes. Perforation of the esophagus frequently occurs. Circulatory collapse may occur after 1 –2 hours.
- 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:****Sodium Bisulfate Monohydrate**

**LD50:** Oral - Rat - 2490 mg/kg

**Sulfuric Acid**

**LC50:** Inhalation - Rat - 510 mg/m<sup>3</sup>

**LD50:** Oral - Rat - 2140 mg/kg

**Chronic Toxicity:****Sulfuric Acid**

NTP: Known to be carcinogenic to humans

**Additional Data:**

APPLICABLE TO MAIN COMPONENT: the following applies to Sulfuric acid, as the pure substance:

Specific symptoms in animal studies:

Skin irritation test (rabbit): burns.

Eye irritation test (rabbit): burns.

Toxicologic values are not available due to other dangerous properties of the substance.

Subacute to chronic toxicity

No appreciable contribution to the cancer risk in humans is to be expected where the limit value for occupational safety is observed.

An embryotoxic effect need not be feared when the threshold limit value is observed.

No teratogenic effect in animal experiments.

Bacterial mutagenicity: Ames-Test: negative.

APPLICABLE TO MAIN COMPONENT: the following applies to Molybdic acid, as the pure substance:

Acute toxicity

LD50 (oral, rat): 2689 mg/kg (Molybdenum(VI) oxide).

LD50 (dermal, rat): >2000 mg/kg (Molybdenum(VI) oxide).

LC50 (inhalation, rat): >5840 mg/m<sup>3</sup> /4 h (Molybdenum(VI) oxide).

Subacute to chronic toxicity

NTP evaluation for carcinogenicity: negative in man.

Other notes

Symptoms of acute molybdenum(VI) intoxication: diarrhea, anemia (decreased hemoglobin concentration in the blood), fatigue. Toxic effects on liver and kidneys after high doses.

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## **SECTION 12: ECOLOGICAL INFORMATION**

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

### **APPLICABLE TO PARTIAL COMPONENTS**

The following applies to Sulfuric acid: harmful effect on aquatic organisms. Harmful effect due to pH shift. Toxic effect on fish and algae.

Caustic even in diluted form. Does not cause biological oxygen deficit. Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities. Neutralization possible in wastewater treatment plants. applicable to partial component(s):

- Fish toxicity:

Sulfuric acid: lethal from 1.2 mg/L; from 6.3 mg/L lethal in 24h.

molybdenum compounds in general: lethal from 25 mg/L;

Daphnia toxicity:

SULFURIC acid: Daphnia magna EC50: 29 mg/L/24 h (calculated on the pure substance).

Algae toxicity:

molybdenum compounds in general: Sc. Quadricauda toxic from 54 mg/L up.

**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:**

ADR/RID: 9, II

UN-No.: 3316

Name : CHEMICAL KIT

### **Sea:**

IMDG: class 9/UN 3316/PG II

Name: CHEMICAL KIT

Marine Pollutant: No

Severe Marine Pollutant: No

### **Air:**

ICAO/IATA: 9/UN 3316/PG II

Name: CHEMICAL KIT

Transport data applies to the COMPLETE KIT!

## **SECTION 15: REGULATORY INFORMATION**

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

**Symbol:** Xi: Irritant

**R-phrases:** 36/38: Irritating to eyes and skin.

**S-phrases:** 26-36: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

## **SECTION 16: OTHER INFORMATION**

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

20/22: Harmful by inhalation and if swallowed.

35: Causes severe burns.

36/37: Irritating to eyes and respiratory system.

41: Risk of serious damage to eyes.

48: Danger of serious damage to health by prolonged exposure.

### **Revision Information**

**Revision Date:** 2009-06-10

**Supersedes edition of:** 2008-12-01

**Reason for revision:** 29 CFR 1910.1200 and SOR/88-66 Compliance

### **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.**