

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

Revision Date: 2012-05-21
Reason for Revision: Section 14 Updated

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY**Product Name:** HI 93705A-0 Silica Reagent A**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

Component:	Sulfuric Acid	Sodium Bisulfate Monohydrate	Ammonium Dimolybdate
EC-No.:	231-639-5	231-665-7	231-970-5
CAS-No.:	7664-93-9	10034-88-5	7782-91-4
Hazard:	C	Xi	Xn
Phrases:	R: 35	R: 41	R: 36/37-48-20/22
Content:	> 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
Ammonium Molybdate Tetrahydrate					
TWA (8hr)	0.5 mg (Mo)/m ³ (respirable)	Canada (Ontario)	TWA (8hr)	0.2 mg (Mn)/m ³	Canada (Ontario)
TWA (8hr)	5 mg (Mo)/m ³	Canada (Quebec)	TWA (8hr)	5 mg (Mo)/m ³	Hungary
TWA (8hr)	4 mg (Mo)/m ³	Poland	TWA (8hr)	2 mg (Mo)/m ³	Romania
TWA (8hr)	0.5 mg (Mo)/m ³	USA (ACGIH)	TWA (8hr)	5 mg (Mo)/m ³	USA (OSHA)
Sulfuric Acid					
TWA (8hr)	1 mg/m ³	Belgium	TWA (8hr)	0.2 mg/m ³	Canada (Ontario)
TWA (8hr)	1 mg/m ³	Canada (Quebec)	TWA (8hr)	1 mg/m ³	France
TWA (8hr)	1 mg/m ³	Greece	TWA (8hr)	1 mg/m ³	Hungary
TWA (8hr)	0.5 mg/m ³	Poland	TWA (8hr)	0.2 mg/m ³	Portugal
TWA (8hr)	0.5 mg/m ³	Romania	TWA (8hr)	1 mg/m ³	Spain
TWA (8hr)	0.2 mg/m ³	USA (ACGIH)	TWA (8hr)	1 mg/m ³	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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Appearance:	Colorless liquid	Odor:	Odorless	Density at 20°C:	1.21 g/cm ³
Melting Point:	ND	Boiling Point:	ND	Solubility:	Soluble
pH at 20°C:	~ 1	Explosion Limit:	NA	Flash Point:	NA
Thermal Decomp.:	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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SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

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/m³

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 Molybdc 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/m³ /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

	<i>Land (ADR/RID):</i>	<i>Sea (IMDG):</i>	<i>Air (ICAO/IATA):</i>
UN No.:	2796	2796	2796
Proper Shipping Name:	Sulphuric acid solution	Sulphuric acid solution	Sulphuric acid solution
Class (Sub Risk):	8	8	8
Packing Group:	II	II	II

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

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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.