HI 93701A-F
Free Chlorine 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: 2016-01-26
Reason for Revision: Removed DSD/DPD Regulation Info

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 93701-F Free Chlorine Reagent A

Additional Product Codes: HI 93701-F

Application: Determination of Free Chlorine 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

Causes skin irritation. Causes serious eye irritation.

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

Classification: Eye Irritation (Category 2)
Skin Irritation (Category 2)

Signal Word: **Warning**

Pictograms:

Hazard Statements: H315: Causes skin irritation.
H319: Causes serious eye irritation.

Precaution Statements: P280: Wear protective gloves/protective clothing/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.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component:	EC No:	CAS No:	Hazard Class:	Phrases:	Concentration:
sulphuric acid	231-639-5	7664-93-9	Skin Corr. 1A	H314	> 5% - < 15%
N,N-Diethyl-1,4-phenylenediammonium sulfate	228-500-6	6283-63-2	Acute Tox. 4	H302, H312	> 1% - < 3%

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 plenty of water. Remove contaminated clothing.

After Eye Contact: Rinse out immediately with plenty of water and seek medical advice.

After Swallowing: Drink plenty of water (if necessary several liters). Seek medical advice.

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.

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 baking soda (sodium bicarbonate) 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*
Sulfuric Acid					
TWA (8hr)	1 mg/m³	Belgium	TWA (8hr)	0.2 mg/m³	Canada (Ontario)
TWA (8hr)	1 mg/m³	Canada (Quebec)	TWA (8hr)	1 mg/m³	France
TWA (8hr)	1 mg/m³	Greece	TWA (8hr)	1 mg/m³	Hungary
TWA (8hr)	0.5 mg/m³	Poland	TWA (8hr)	0.2 mg/m³	Portugal
TWA (8hr)	0.5 mg/m³	Romania	TWA (8hr)	1 mg/m³	Spain
TWA (8hr)	0.2 mg/m³	USA (ACGIH)	TWA (8hr)	1 mg/m³	USA (OSHA)

Engineering:

Safety shower and eye wash.

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.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Colorless liquid	***Odor:***	Odorless	***Density at 20°C:***	1.07 g/cm³
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:

Not available

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

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

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

Potential Health Effects:

Inhalation:	Damage to the affected mucous membranes.
Skin Contact:	Irritations.
Eye Contact:	Possibility of corneal lesions.
Ingestion:	Damage to the affected mucous membranes possible.
Further Data:	The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

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 PARTIAL COMPONENT:
The following applies to Sulfuric acid, as the pure substance:
Specific symptoms in animal studies:
Eye irritation test (rabbit): burns.
Skin irritation test (rabbit): burns.
Toxicological values are not available due to other dangerous properties of the substance.
Subacute to chronic toxicity
Applicable to partial component(s):
Bacterial mutagenicity: Ames test: negative.
No teratogenic effect in animal experiments.

SECTION 12: ECOLOGICAL INFORMATION

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

APPLICABLE TO PARTIAL COMPONENT:
The following applies to Sulfuric acid, 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:
Quantitative data on the ecological effect of this product are not available.
Further ecologic data:
The following applies to sulfuric acid: biological effects: 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 waste water treatment plants.
Daphnia toxicity: Daphnia magna EC 50 : 29 mg/L/24 h (calculated on the pure substance).

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):	***Sea (IMDG):***	***Air (ICAO/IATA):***
UN No.:	3264	3264	3264
Proper Shipping Name:	Corrosive liquid, acidic, inorganic, n.o.s. (sulphuric acid solution)	Corrosive liquid, acidic, inorganic, n.o.s. (sulphuric acid solution)	Corrosive liquid, acidic, inorganic, n.o.s. (sulphuric acid solution)
Class (Sub Risk):	8	8	8
Packing Group:	III	III	III
Marine Pollutant:		No	

SECTION 15: REGULATORY INFORMATION

Complies with European Regulations (EC) No. 1907/2006 and No. 1272/2008.
Complies with OSHA Regulation 29 CFR 1910.1200.
Complies with Canadian Regulation SOR/88-66.
All chemical substances in this product are listed on the TSCA Inventory.

SECTION 16: OTHER INFORMATION

Text of phrases under Section 3

H314: Causes severe skin burns and eye damage.
H302: Harmful if swallowed.
H312: Harmful in contact with skin.

Revision Information

Revision Date:	2016-01-26
Supersedes edition of:	2013-01-22
Reason for revision:	Removed DSD/DPD Regulation Info
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.