

Revision Date: 2008-12-01

Reason for Revision: REACH Compliance and General Update

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 7074 Electrode Cleaning Solution

Additional Product Codes: HI 7074L
HI 7074M

Application: Cleaning Solution for Application with Inorganics

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

Limited evidence of a carcinogenic effect. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component:	Hydrochloric Acid	Thiourea
EC-No.:	231-595-7	200-543-5
CAS-No.:	7647-01-0	62-56-6
Hazard:	C	Xn, N, Carc. Cat. 3, Repr. Cat. 3
Phrases:	R: 34-37	R: 22-40-51/53-63
Content:	> 1% - < 10%	> 1% - < 5%



SECTION 4: FIRST AID MEASURES

After Inhalation:	Remove to fresh air. Call a physician if breathing becomes difficult.
After Skin Contact:	Wash effected 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:	Not available

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, Sulfur Oxides, Nitrogen Oxides

Special Protective Equipment:

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

Additional Information:

Prevent fire-fighting water from entering surface water or groundwater.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Do not inhale vapors/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

Environmental Precautions:

Do not allow to enter the sewerage system.

Additional Notes:

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

SECTION 7: HANDLING AND STORAGE

Handling:

Avoid generation of vapors/aerosols. Do not inhale substance. Work under hood.

Storage:

Tightly closed. In a well-ventilated place at +15 to +25 °C.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Ingredients:

EC

Name: Thiourea

Carcinogenic: C 3: owing possible carcinogenic effects for man

Embryotoxic: R(E) 3: cause concern to humans owing to possible developmental toxic effects

EC

Name: Hydrogen chloride

Value: 5 mL/m³, 8 mg/m³

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. Work under hood.

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

Odor: Odorless

Density at 20° C: 1.04 g/cm³

Melting Point: NA

Boiling Point: ND

Solubility: Soluble

pH at 20° C: < 0.5

Explosion Limit: NA

Flash Point: NA

Thermal Decomp.: NA

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

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:

The generally known reaction partners of water

SECTION 11: TOXICOLOGICAL INFORMATION

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

APPLICABLE TO PARTIAL COMPONENT:

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

Acute toxicity

LC50, Inhalation, Rat: 3124 ppm(V)/1h – calculated on the pure substance.

Chronic exposure - teratogen

Species: Rat, Dose: 450 mg/m³/1h

Route of Application: Inhalation

Exposure Time: (1D PRE)

Result: Specific Developmental Abnormalities.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Thiourea – as the pure substance:

Acute toxicity

LD50 (dermal, rabbit): >2800 mg/kg.

LD50 (oral, rat): 1750 mg/kg.

Specific symptoms in animal studies:

Eye irritation test (rabbit): Slight irritations (OECD 405).

Skin irritation test (rabbit): No irritation (OECD 404).

Subacute to chronic toxicity

The carcinogenic potential requires further clarification.

The possibility of an embryotoxic effect has not yet been fully assessed. Pregnant women must not be exposed to the product.

Mutagenicity (mammal cell test): micronucleus negative.

Bacterial mutagenicity: Ames test: negative.

In Case of Inhalation: Absorption. Mucosal irritations. Sensitization possible in predisposed persons.

In Case of Skin Contact: Irritations. Sensitization possible in predisposed persons.

In Case of Eye Contact: Irritations.

In Case of Ingestion: Irritations of mucous membranes in the mouth, pharynx, esophagus and gastrointestinal tract, nausea, vomiting, diarrhoea, gastrointestinal complaints.

Further Data: Changes in the blood picture. Damage of: thyroid, bone marrow. The product should be handled with the usual care when dealing with chemicals. Property of this product must be anticipated on the basis from the components of the preparation:

SECTION 12: ECOLOGICAL INFORMATION

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

APPLICABLE TO PARTIAL COMPONENT:

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

Ecotoxicological effects

Toxic effects on fish and plankton. Forms corrosive mixtures with water even if diluted. Damage to plant growth.

The following applies to HCl in general: harmful effects on aquatic organisms. Harmful effects due to pH shift.

Biological effects: hydrochloric acid (including such due to reaction): lethal for fish as from 25mg/L.

Test Type: LC50 Species: Leuciscus idus: Time: 96 h, value: 862 mg/L (1N solution).

Harmful effects begins at: plants 6 mg/L. Does not cause biological oxygen deficit.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Thiourea – as the pure substance:

Biologic degradation:

Biodegradation: 0 % /34 d MITI test.

Biologically not readily degradable.

Behavior in environmental compartments:

Distribution: log p(o/w): -0.92 (20 °C) (experimental).

No bioaccumulation is to be expected (log P(o/w) <1).

Ecotoxic effects:

Biological effects:

Toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Fish toxicity: Br.rerio LC50: 10000 mg/L /96 h.

Daphnia toxicity: Daphnia magna EC50: 35 mg/L /48 h. Algal toxicity: Desmodesmus subspicatus IC50: 3.8-10 mg/L /72 h.

Bacterial toxicity: Ps.putida EC10: 1265 mg/L /18 h.

Further ecologic data:

Degradability:

BOD5: 0.013 g/g.

COD: 0.84 g/g.

TOD: 2.42 g/g.

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: 8, III

UN-No.: 2922

Name : CORROSIVE LIQUID, TOXIC

n.o.s. (Thiourea, hydrochloric acid solution)

Sea:

IMDG: class 8/UN 2922/PG III

Name: CORROSIVE LIQUID, TOXIC

n.o.s. (Thiourea, hydrochloric acid solution)

Air:

ICAO/IATA: 8/UN 2922/PG III

Name: CORROSIVE LIQUID, TOXIC

n.o.s. (Thiourea, hydrochloric acid solution)

Transport data applies to the COMPLETE KIT!

SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:

Symbol: Xn: Harmful

R-phrases: 40-52/53: Limited evidence of a carcinogenic effect. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases: 36/37-61: Wear suitable protective clothing and gloves. Avoid release to the environment. Refer to special instructions/Safety data sheets.

Contains: Thiourea, Hydrochloric acid

SECTION 16: OTHER INFORMATION***Text of R-phrases under Section 3***

22: Harmful if swallowed.
34: Causes burns.
37: Irritating to respiratory system.
40: Limited evidence of a carcinogenic effect.
51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
63: Possible risk of harm to the unborn child.

Revision Information

Revision Date: 2008-12-01
Supersedes edition of: 2008-01-17
Reason for revision: REACH Compliance and General Update

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.