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HI 3838-0
Reagent Titrant Solution
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 3838-0 Reagent Titrant Solution

Application: Determination of Formaldehyde 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

Non-hazardous product as specified in Directives 67/548/EEC and 1999/45/EC.
Non-hazardous product as specified in OSHA Regulation 29 CFR 1910.1200.
Non-hazardous product as specified in Canadian Regulation SOR/88-66.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component: Hydrochloric Acid

EC-No.: 231-595-7

CAS-No.: 7647-01-0

Hazard: C

Phrases: R: 34-37

Content: > 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:

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

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 with liquid-absorbent material. Clean up affected area and dispose according to local regulation. 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.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	Value	Source	Type	Value	Source
Hydrochloric Acid					
TWA (8hr)	8 mg/m ³	Belgium	Ceiling	2 ppm	Canada (Ontario)
Ceiling	5 ppm	Canada (Quebec)	TWA (15min)	7.6 mg/m ³	France
TWA (8hr)	3 mg/m ³	Germany	TWA (8hr)	7 mg/m ³	Greece
TWA (8hr)	8 mg/m ³	Hungary	TWA (8hr)	8 mg/m ³	Italy
TWA (8hr)	8 mg/m ³	Netherlands	TWA (8hr)	5 mg/m ³	Poland
Ceiling	2 ppm	Portugal	TWA (8hr)	8 mg/m ³	Romania
TWA (8hr)	7.6 mg/m ³	Spain	TWA (8hr)	2 mg/m ³	UK
Ceiling	2 ppm	USA (ACGIH)	Ceiling	5 ppm	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. Work under hood.

Protective Gloves:

Rubber or plastic

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Wash thoroughly after handling. Remove and wash contaminated clothing promptly. Discard contaminated shoes.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Colorless liquid	Odor:	Odorless	Density at 20° C:	1.02 g/cm ³
Melting Point:	NA	Boiling Point:	ND	Solubility:	Soluble
pH at 20° C:	< 1	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**Product Toxicity**

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

Potential Health Effects:**Inhalation:** Absorption. Mucosal irritations. Sensitization possible in predisposed persons.**Skin Contact:** Slight irritations. Sensitization possible in predisposed persons.**Eye Contact:** Irritations.**Ingestion:** Irritations of mucous membranes in the mouth, pharynx, esophagus and gastrointestinal tract.**Further Data:** The product should be handled with the usual care when dealing with chemicals.**Component Toxicity****Acute Toxicity:****Chronic Toxicity:**

Not Available

Hydrochloric Acid**LC50:** Inhalation - Rat - 1562 ppm**LD50:** Oral - Rabbit - 900 mg/kg**Additional Data:**

APPLICABLE TO PARTIAL COMPONENT:

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

Signs and symptoms of exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Risk of perforation in the esophagus and stomach. After a latency period: cardiovascular failure.

Route of exposure

Skin Contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes burns.

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed.

Chronic exposure - teratogen

Species: Rat, Dose: 450 mg/m³/1h

Route of Application: Inhalation

Exposure Time: (1D PRE)

Result: Specific Developmental Abnormalities.

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.

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:

Not subject to transport regulations

Sea:

Not subject to transport regulations

Air:

Not subject to transport regulations

SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:

Non-hazardous according to Directives 67/548/EEC and 1999/45/EC.

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

34: Causes burns.

37: Irritating to respiratory system.

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.