HI 93731B-0
Zinc Reagent B

Safety Data Sheet

According 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 93731B-0 Zinc Reagent B

Additional Product Codes: HI 93731B/76

Application: Determination of Zinc 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

Flammable. Harmful by inhalation.

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

Classification: Flammable Liquids (Category 3)
Acute Toxicity, Inhalation (Category 4)

Signal Word: **Warning**

Pictograms:

Hazard Statements: H226: Flammable liquid and vapour.
H332: Harmful if inhaled.

Precaution Statements: P210: Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

According to Directives 67/548/EEC and 1999/45/EC:

Symbol: Xn: Harmful

R-phrases: 10-20: Flammable. Harmful by inhalation.

S-phrases: 25: Avoid contact with skin.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component:	*EC No:*	*CAS No:*	*Hazard Class:*	*Phrases:*	*Concentration:*
Cyclohexanone	203-631-1	108-94-1	Flam. Liq. 3 Acute Tox. 4	H226, H332 R: 10-20	-

SECTION 4: FIRST AID MEASURES

After Inhalation: Remove to fresh air. Immediately call in physician. If necessary, apply mouth-to-mouth resuscitation or mechanical ventilation.

After Skin Contact: Wash affected area with plenty of water. Remove contaminated clothing.

After Eye Contact: Rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Call in ophthalmologist.

After Swallowing: Avoid vomiting. Risk of aspiration! Call in physician. Laxative: Paraffin oil (3 mL/kg). Sodium sulfate (1 tablespoon/1/4 l water).

General Information: Not available

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Powder, Foam

Special Risks:

Combustible. Vapors heavier than air. Formation of explosive mixtures possible with air. Keep away from sources of ignition. Take measures to prevent electrostatic charging. Development of hazardous combustion gases or vapors possible in the event of fire.

Special Protective Equipment:

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

Additional Information:

Cool container with spray water from a safe distance.
Prevent fire-fighting water from entering surface water or groundwater.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

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

Environmental Precautions:

Do not allow to enter sewerage system

Additional Notes:

Take up with liquid absorbent material. Forward for disposal. Clean up affected area.

SECTION 7: HANDLING AND STORAGE

Handling:

Notes for prevention of fire and explosion: Keep away from sources of ignition – No smoking. Take measures to prevent electrostatic charging

Storage:

Tightly closed in a dry and well-ventilated place. Store at room temperature (+15 to +25 °C). Keep away from sources of ignition and heat – No smoking.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	*Value*	*Source*	*Type*	*Value*	*Source*
Cyclohexanone					
TWA (8hr)	40.8 mg/m³	Belgium	TWA (8hr)	20 ppm	Canada (Ontario)
TWA (8hr)	100 mg/m³	Canada (Quebec)	TWA (8hr)	40.8 mg/m³	France
TWA (8hr)	80 mg/m³	Germany	TWA (8hr)	200 mg/m³	Greece
TWA (8hr)	40.8 mg/m³	Hungary	TWA (8hr)	40.8 mg/m³	Italy
TWA (15min)	50 mg/m³	Netherlands	TWA (8hr)	40 mg/m³	Poland
TWA (8hr)	20 ppm	Portugal	TWA (8hr)	40.8 mg/m³	Romania
TWA (8hr)	41 mg/m³	Spain	TWA (8hr)	10 ppm	UK
TWA (8hr)	25 ppm	USA (ACGIH)	TWA (8hr)	50 ppm	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. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory Protection:

Required when vapours/aerosols are generated. Filter A (acc. to DIN 3181) for vapours of organic compounds

Protective Gloves:

Rubber or plastic

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Change contaminated clothing. Apply skin-protective barrier cream. Wash hands after working with substance.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Colorless liquid	***Odor:***	Pungent	***Density at 20°C:***	0.95 g/cm³
Melting Point:	-16 °C	***Boiling Point:***	155 °C	***Solubility:***	90 g/L (20 °C) Soluble in ethanol.
pH at 20°C:	~ 7 @ 70 g/L	***Explosion Limit:***	Lower 1.3 vol% Upper 9.4 vol%	***Flash Point:***	43°C
Thermal Decomp.:	NA				

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Heat.

Hazardous Polymerization:

Will not occur.

Further Information:

Inflammable. Possible explosive mixture with air in a vaporous/gaseous state.

Hazardous Decomposition Products:

Not available.

Substances to be Avoided:

Nitric acid, hydrogen peroxide (risk of explosion!), oxidizing agent, mineral acids

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

Subacute to chronic toxicity:
Bacterial mutagenicity: Ames test: negative.

Potential Health Effects:

Inhalation: In high doses: Irritation symptoms in the respiratory tract.

Skin Contact: After long-term exposure to the chemical: degreasing effect on the skin, possibly followed by secondary inflammation. Danger of skin absorption.

Eye Contact: Irritations. Risk of corneal clouding.

Ingestion: Gastrointestinal complaints. After absorption of large quantities: headache, salivation, nausea, vomiting, dizziness, narcosis, coma.

Further Data: The following applies to ketones in general: when vapours/aerosols occur, mucosal irritations, coughing, and dyspnoea after inhalation. The absorption of large quantities leads to: CNS depression (narcosis). Repeated skin contact leads to a degreasing effect, with secondary inflammation possible. Toxic effects on the liver and kidneys cannot be excluded after high doses. The inhalation of droplets may result in the formation of oedemas in the respiratory tract. The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Cyclohexanone

LC50: Inhalation - Rat - 8000 ppm

LD50: Oral - Mouse - 1400 mg/kg

Chronic Toxicity:

Not Available

Additional Data:

Not Available

SECTION 12: ECOLOGICAL INFORMATION

Biologic degradation:
Biodegradation: 87 % /14 d MITI test.
Readily biodegradable.
Behavior in environmental compartments:
Distribution: log p(o/w): 0.81 (experimental). No bioaccumulation is to be expected (log P(o/w <1).
Ecotoxicological effects
Biological effects:
Fish toxicity: L.idus LC 50 : 536 mg/L /48 h.
Daphnia toxicity: Daphnia magna EC 50 : 800 mg/L /24 h.
Algeal toxicity: Sc.quadricauda IC 5 : 370 mg/L /8 d.
Bacterial toxicity: Ps.putida EC 5 : 180 mg/L /16 h.
Protozoa protozoen EC 5 : 573 mg/L /48 h.
Further ecologic data:
TOD: 2.608 g/g.

Further Data: Do not allow to enter waters, waste water, 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.:	1915	1915	1915
Proper Shipping Name:	Cyclohexanone	Cyclohexanone	Cyclohexanone
Class (Sub Risk):	3	3	3
Packing Group:	III	III	III

SECTION 15: REGULATORY INFORMATION

Complies with European Regulations (EC) No. 1907/2006 and No. 1272/2008.
Complies with European Council Directives 67/548/EEC and 1999/45/EC.
Complies with OSHA Regulation 29 CFR 1910.1200.
Complies with Canadian Regulation SOR/88-66

SECTION 16: OTHER INFORMATION

Text of phrases under Section 3

R10: Flammable.
R20: Harmful by inhalation.
H226: Flammable liquid and vapour.
H332: Harmful if inhaled.

Revision Information

Revision Date:	2012-05-21
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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.