

Revision Date: 2010-12-01
Reason for Revision: Regulation (EC) No. 1272/2008 Compliance

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 93735B-0 Hardness Buffer Reagent B

Application: Determination of Hardness 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. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

Classification: Eye Irritation (Category 2)
 Skin Irritation (Category 2)
 Chronic Aquatic Toxicity (Category 3)

Signal Word: **Warning**

Pictograms:



Hazard Statements: H315: Causes skin irritation.
 H319: Causes serious eye irritation.
 H412: Harmful to aquatic life with long lasting effects.

Precaution Statements: P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352: IF ON SKIN: Wash with plenty of soap and water.
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

Symbol: Xi: Irritant

R-phrases: 36/38-52/53: Irritating to eyes and skin. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases: 61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component:	EC No:	CAS No:	Hazard Class:	Phrases:	Concentration:
2-amino-2-methylpropanol	204-709-8	124-68-5	Eye Irrit. 2 Skin Irrit. 2 Aquatic Chronic 3	H315, H319, H412 R: 36/38-52/53	-

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 with plenty of water for at least 15 minutes. If pain persists, summon medical advice.

After Swallowing: Make victim drink plenty of water. Call in physician.

General Information: Not available

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:
 Carbon Dioxide, Foam, Powder

Special Risks:
 Combustible. Vapours heavier than air. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire. The following may develop in event of fire: Nitrogen Oxides

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

Additional Information:
 Contain escaping vapours with water. 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.

SECTION 7: HANDLING AND STORAGE

Handling:	Storage:
Avoid generation of vapors/aerosols. Do not inhale substance.	Tightly closed. In a well-ventilated place at +15 to +25 °C.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	Value	Source	Type	Value	Source
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2-amino-2-methylpropanol

TWA (8hr)	4.6 mg/m ³	Germany
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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.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Colorless solution	Odor:	Amine-like	Density at 20 °C:	0.93 g/cm ³
Melting Point:	18 °C	Boiling Point:	165 °C	Solubility:	Soluble
pH at 20 °C:	11.3 @ 9 g/L	Explosion Limit:	NA	Flash Point:	67 °C
Thermal Decomp.:	> 360 °C				

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:

Violent reactions possible with strong oxidizing agents and acids.

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

Specific symptoms in animal studies:

Eye irritation test (rabbit): Severe irritations (External MSDS).

Skin irritation test (rabbit): Severe irritations (IUCLID). Subacute to chronic toxicity

Sensitization:

Sensitization test (guinea pig): negative. (IUCLID)

Bacterial mutagenicity: Ames test: negative. (in vitro) (IUCLID)

Potential Health Effects:

Inhalation: Mucosal irritations, coughing, dyspnoea. Inhalation may lead to the formation of oedemas in the respiratory tract.
 Possible damages: pneumonia.

Skin Contact: Severe irritations, absorption.

Eye Contact: Severe irritations.

Ingestion: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Further Data: Systemic effects: CNS disorders, cardiovascular disorders. Toxic effect on: liver, kidneys. The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Chronic Toxicity:

Not Available

2-amino-2-methylpropanol

LD50: Oral - Rat - 2900 mg/kg

Additional Data:

Not Available

SECTION 12: ECOLOGICAL INFORMATION

Biologic degradation:
 Biodegradation: 40 % /28 d.
 Biologically not readily degradable.
 Behavior in environmental compartments:
 Distribution: log p(o/w): -0.74 (calculated).
 No bioaccumulation is to be expected (log P(o/w) <1).
 Ecotoxic effects:
 Biological effects: Harmful effect on aquatic organisms. May cause long-term adverse effects in the aquatic environment.
 Fish toxicity: L.macrochirus LC50: 190 mg/L /96 h.
 Daphnia toxicity: Daphnia magna EC50: 65 mg/L /24 h.
 Algal toxicity: Desmodesmus subspicatus IC50: 520 mg/L /72 h.
 Bacterial toxicity: Ps.putida EC10: 50 mg/L.
 Further ecologic data:
 COD: 2.050 g/g.
 BOD5: <0.01 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:	Sea:	Air:
Not subject to transport regulations.	Not subject to transport regulations	Not subject to transport regulations.

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

R36/38: Irritating to eyes and skin.
 R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 H315: Causes skin irritation.
 H319: Causes serious eye irritation.
 H412: Harmful to aquatic life with long lasting effects.

Revision Information

Revision Date: 2010-12-01
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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.