

**Revision Date:** 2008-12-01  
**Reason for Revision:** REACH Compliance and General Update

**SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY**

**Product Name:** HI 50013 pH 13.00 Buffer Solution

**Application:** pH Buffer Solution

**Company Information (USA):**

**Additional Product Codes:** HI 50013-01  
HI 50013-02

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:**

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**SECTION 2: HAZARD IDENTIFICATION**

Irritating to eyes and skin.

**SECTION 3: COMPOSITION AND COMPONENT INFORMATION**

**Component:** Sodium Hydroxide

**EC-No.:** 215-185-5

**CAS-No.:** 1310-73-2

**Hazard:** C

**Phrases:** R: 35

**Content:** > 0.5% - < 2%

**SECTION 4: FIRST AID MEASURES**

**After Inhalation:** Remove to fresh air.

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

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

**After Swallowing:** make victim drink plenty of water, avoid vomiting. Immediately seek medical advice. Do not attempt to neutralize.

**General Information:** Not available

**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.

**Special Protective Equipment:**

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

**Additional Information:**

Contain escaping vapors 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 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 sulfuric acid.

**SECTION 7: HANDLING AND STORAGE****Handling:**

Avoid generation of vapors/aerosols. Do not inhale substance.

**Storage:**

Store at room temperature (+15 to +25 °C). Tightly closed in a dry and well-ventilated place.

**SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION****Ingredients:**

USA - OSHA  
Name: Sodium Hydroxide  
Type: PEL  
Value: 2 mg/m<sup>3</sup>

**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. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

**Respiratory Protection:**

Required when vapors/aerosols are generated. Work under hood.

**Protective Gloves:**

Rubber or plastic

**Eye Protection:**

Goggles or face mask

**Industrial Hygiene:**

Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance.

**SECTION 9: PHYSICAL/CHEMICAL PROPERTIES**

**Appearance:** Colorless liquid

**Odor:** Odorless

**Density at 20° C:** 1.0 g/cm<sup>3</sup> at 25°C

**Melting Point:** NA

**Boiling Point:** > 100 °C

**Solubility:** Soluble

**pH at 20° C:** 13 at 25°C

**Explosion Limit:** ND

**Flash Point:** ND

**Thermal Decomp.:** NA

**SECTION 10: STABILITY AND REACTIVITY****Conditions to be Avoided:**

Heating

**Hazardous Polymerization:**

Will not occur.

**Further Information:**

Unsuitable working materials: various metals.

**Hazardous Decomposition Products:**

In the event of fire: See section 5.

**Substances to be Avoided:**

Ammonium compounds: formed could be: ammonia Acids 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 Sodium hydroxide – as the pure substance

**Acute toxicity**

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

**Specific symptoms in animal studies:**

Eye irritation test (rabbit): burns (RTECS).

Skin irritation test (rabbit): burns (RTECS).

**Subacute to chronic toxicity**

Mutagenicity (mammal cell test): micronucleus negative. (Lit.)

Bacterial mutagenicity: Escherichia coli: negative. (Lit.)

No teratogenic effect in animal experiments. (Lit.)

**In Case of Inhalation:** Mucosal irritations, coughing, dyspnoea.

**In Case of Skin Contact:** Irritations.

**In Case of Eye Contact:** Irritations.

**In Case of Ingestion:** Irritations of mouth, mucous membrane, esophagus.

**Further Data:** further hazardous properties cannot be excluded. The product should be handled with the usual care when dealing with chemicals.

**SECTION 12: ECOLOGICAL INFORMATION**

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

**APPLICABLE TO PARTIAL COMPONENT:**

The following applies to Sodium hydroxide – 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:****Biological effects:**

Harmful effect on aquatic organisms. Toxic effect on fish and plankton. Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. Does not cause biological oxygen deficit. Neutralization possible in waste water treatment plants.

Fish toxicity: Onchorhynchus mykiss LC50: 45.4 mg/L /96 h (in hard water) (IUCLID).

L.macrochirus LC50: 99 mg/L /48 h (IUCLID).

Daphnia toxicity: Daphnia magna EC50: 76 mg/L /24 h (External MSDS).

**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:**

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:**

**Symbol:** Xi: Irritant

**R-phrases:** 36/38: Irritating to eyes and skin.

**S-phrases:** 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Contains:**

**SECTION 16: OTHER INFORMATION**

***Text of R-phrases under Section 3***

35:Causes severe burns.

***Revision Information***

**Revision Date:** 2008-12-01

**Supersedes edition of:** 2006-07-20

**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.**