



HI 5005
pH 5.00 Buffer Solution
Safety Data Sheet

According to Regulation (EC) No. 1907/2006
OSHA Regulation 29 CFR 1910.1200
Canadian Regulation SOR/88-66

Revision Date: 2013-07-01
Reason for Revision: Regulation (EC) No. 1272/2008 Compliance

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 5005 pH 5.00 Buffer Solution. **Additional Product Codes:** HI 5005-01
Application: pH Buffer Solution
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.
Non-hazardous product as specified in Regulation (EC) 1272/2008.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component:	EC No:	CAS No:	Hazard Class:	Phrases:	Concentration:
Citric acid	201-069-1	77-92-9	Skin Irrit. 2 Eye Dam. 1 Xi	H315, H318 R: 38-41	> 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 plenty of 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.
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.

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

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 liquid

Odor: Odorless

Density at 20°C: 1.0 g/cm³ at 25°C

Melting Point: NA

Boiling Point: > 100°C

Solubility: Soluble

pH at 20°C: 5.00 at 25°C

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: Mucosal irritations.

Skin Contact: Slight irritations possible.

Eye Contact: Irritations.

Ingestion: Coughing, pain, bloody vomiting possible.

Further Data: The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Not Available

Chronic Toxicity:

Not Available

Additional Data:

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Citric acid anhydrous – as the pure substance:

Acute toxicity

LD50 (oral, rat): 3000 mg/kg (RTECS).

Specific symptoms in animal studies:

Eye irritation test (rabbit): Severe irritations (Lit.).

Skin irritation test (rabbit): Slight irritations (Lit.).

Subacute to chronic toxicity

Bacterial mutagenicity: Ames test: negative. (Lit.)

No teratogenic effect in animal experiments. (Lit.)

No impairment of reproductive performance in animal experiments. (Lit.)

SECTION 12: ECOLOGICAL INFORMATION

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

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Citric acid anhydrous – as the pure substance:

Biologic degradation:

Biodegradation: 98 % /2 d (OECD 302 B) (IUCLID).

Easily eliminable.

Behavior in environmental compartments:

Distribution: log Pow: -1.72 (20 °C) (IUCLID).

No bioaccumulation is to be expected (log Pow <1).

Ecotoxic effects:

Biological effects: Harmful effect due to pH shift.

Fish toxicity: *L.idus* LC50: 440-760 mg/L /96 h (IUCLID).

Daphnia toxicity: *Daphnia magna* EC50: ~120 mg/L /72 h (IUCLID).

Maximum permissible toxic concentration:

Protozoa: *E.sulcatum* EC5: 485 mg/L /72 h (Lit.).

Bacterial toxicity: *Ps.putida* EC5: >10000 mg/L /16 h (Lit.). *M.aeruginosa* EC5: 80 mg/L /8 d (Lit.).

Algal toxicity: *Sc.quadricauda* IC5: 640 mg/L /7 d (Lit.).

Further ecologic data:

Degradability:

BOD5: 0.526 g/g (Lit.).

TOD: 0.75 g/g (calculated).

COD: 0.728 g/g (Lit.).

Further Data: No ecological problems are to be expected when the product is handled and used with due care and attention.

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

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***

R38: Irritating to skin.
R41: Risk of serious damage to eyes.
H315: Causes skin irritation.
H318: Causes serious eye damage.

Revision Information

Revision Date: 2013-07-01
Supersedes edition of: 2012-06-01
Reason for revision: Regulation (EC) No. 1272/2008
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.