

Safety Data Sheet

Section 1: Identification

Product Name: MICkit® Barge Test Kit

Product Code: MICkit® Barge

Manufacturer: BTI Products, LLC.

652 Silver Hills Road Bayfield, Colorado 81122

USA

Telephone: (970) 884-4629 Website: <u>www.bti-labs.com</u>

Email: <u>products@bti-labs.com</u>

Emergency Phone: (800) 262-8200 CHEMTREC

Recommended Use: Microbiological testing for active corrosion

Restrictions on Use: Use only as directed on instructions

Section 2: Hazardous Component Identification

United States (US)

According to OSHA 1910.1200

Components: (see following individual SDS for detailed information)

> 2N Hydrochloric Acid (HCl)

Section 3: Composition/Information on Ingredients

See following individual SDS for detailed information

Section 4: First-Aid Measures

See following individual SDS for detailed information

Section 5: Fire-Fighting Measures

See following individual SDS for detailed information

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Section 6: Accidental Release Measures

See following individual SDS for detailed information

Section 7: Handling and Storage

See following individual SDS for detailed information

Section 8: Exposure Controls/ Personal Protection

See following individual SDS for detailed information

Section 9: Physical and Chemical Properties

See following individual SDS for detailed information

Section 10: Stability and Reactivity

See following individual SDS for detailed information

Section 11: Toxicological Information

See following individual SDS for detailed information

Section 12: Ecological Information

See following individual SDS for detailed information

Section 13: Disposal Considerations

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Section 14: Transport Information

See following individual SDS for detailed information

Section 15: Regulatory Information

See following individual SDS for detailed information

Section 16: Other Information

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MICkit® Barge

Date of Last Revision: May 2, 2019 Preparation Date: July 31, 2015

Disclaimer: BTI Products, LLC. Disclaims any expressed or implied warranty of merchantability or fitness of its products for any other purpose than described in its technical literature and in no event shall BTI Products, LLC. be liable for any consequential damages arising from use of this product.

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STGMA-ALDRICH

MATERIAL SAFETY DATA SHEET

Date Printed: 28.04.2015 Date Updated: 14.06.2012 Version 1.11

Section 1 - Product and Company Information

Product Name	HYDROCHLORIC	ACTD	SOLUTION	2.	. 0	N

H3037 Product Number Brand SIGMA

Company Sigma-Aldrich Address 3050 Spruce Street

SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832 800-325-5052 Fax: Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
HYDROCHLORIC ACID SOLUTION, >=5% -	7647-01-0	No

<10%

Ingredient Name CAS # Percent SARA 313

WATER 7732-18-5 >= 90 No

< 95

HYDROCHLORIC ACID 7647-01-0 >= 5

< 10

Formula HCl

Synonyms Acide chlorhydrique (French) * Acido cloridrico

(Italian) * Anhydrous hydrochloric acid * Chloorwaterstof (Dutch) * Chlorohydric acid * Chlorowodor (Polish) * Chlorwasserstoff (German) * Hydrochloride * Hydrogen chloride (ACGIH:OSHA)

* Muriatic acid * Spirits of salt

MW4025000 RTECS Number:

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Irritating to eyes, respiratory system and skin.

HMIS RATING

HEALTH: 2

FLAMMABILITY: 0 REACTIVITY: 0

NFPA RATING

HEALTH: 2

FLAMMABILITY: 0 REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing.

STORAGE

Suitable: Keep tightly closed.

SPECIAL REQUIREMENTS

May develop pressure. Open carefully.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Discard contaminated shoes. Wash contaminated clothing before reuse.

EXPOSURE LIMITS, RTECS

Country Source Type Value Ceiling co2 PPM USA ACGTH

USA MSHA Standard Ceiling co5 PPM (7 MG/M3) OSHA. PELCL 5 PPM (7 MG/M3) USA

New Zealand OEL

Remarks: check ACGIH TLV

USA NIOSH Ceiling co5 PPM

EXPOSURE LIMITS

Country Source Type Value Poland NDS Poland NDSCh 10 Poland NDSP

Section 9 - Physical/Chemical Properties

Physical State: Liquid Appearance

> Color: Colorless Form: Clear liquid

Property Value At Temperature or Pressure

Molecular Weight 36,4600 AMU

N/A рН BP/BP Range N/A MP/MP Range N/A Freezing Point N/A Vapor Pressure N/A Vapor Density N/A Saturated Vapor Conc. N/A

SG/Density 1,0330 g/cm3

Bulk Density N/A Odor Threshold N/A Volatile% N/A VOC Content N/A

Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Surface Tension	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Refractive Index	N/A
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Bases, Amines, Alkali metals, Metals.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Hydrogen chloride gas.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

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

Eye Contact: Causes eye irritation.

Inhalation: May be harmful if inhaled. Material is irritating to

mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynxand bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

TOXICITY DATA

Oral

Man

2,857000 mg/kg

Remarks: Lungs, Thorax, or Respiration: Respiratory depression. Gastrointestinal: Changes in structure or function of esophagus. Vascular: BP lowering not charactertized in autonomic section.

Oral

```
Woman
   420 UL/KG
   LDLO
   Remarks: Behavioral:Excitement. Cardiac:Pulse rate. Kidney,
   Ureter, Bladder: Hematuria.
   Inhalation
   Human
   1.300, ppm
  LCLO
   Inhalation
   Human
   3.000, ppm
   LCLO
   Inhalation
   Rat
   3.124, ppm
   LC50
   Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and
   Taste):Olfaction:Other changes. Sense Organs and Special Senses
   (Nose, Eye, Ear, and Taste): Eye: Iritis.
   Inhalation
   Mouse
   1.108, ppm
   LC50
   Remarks: Lungs, Thorax, or Respiration: Respiratory stimulation.
   Sense Organs and Special Senses (Nose, Eye, Ear, and
   Taste): Eye: Other. Skin and Appendages: Skin: After systemic
   exposure: Dermatitis, other
   Intraperitoneal
  Mouse
   40142 UG/KG
   LD50
   Oral
   Rabbit
   900,000000 mg/kg
   LD50
IRRITATION DATA
   Eyes
   Rabbit
   5,000000 mg
   30S
   Remarks: Rinsed
CHRONIC EXPOSURE - CARCINOGEN
  Result: This product is or contains a component that is not
   classifiable as to its carcinogenicity based on its IARC, ACGIH,
   NTP, or EPA classification.
IARC CARCINOGEN LIST
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Rating: Group 3

CHRONIC EXPOSURE - TERATOGEN

Species: Rat

Dose: 450 MG/M3/1H

Route of Application: Inhalation

Exposure Time: (1D PRE)

Result: Specific Developmental Abnormalities: Homeostasis Effects on Embryo or Fetus: Fetotoxicity (except death, e.g.,

stunted fetus).

CHRONIC EXPOSURE - MUTAGEN

Species: Hamster Dose: 30 MMOL/L Cell Type: lung

Mutation test: Cytogenetic analysis

Species: Hamster Dose: 8 MMOL/L Cell Type: ovary

Mutation test: Cytogenetic analysis

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Hydrochloric acid

UN#: 1789 Class: 8

Packing Group: Packing Group III

Hazard Label: Corrosive

PIH: Not PIH

IATA

Proper Shipping Name: Hydrochloric acid

IATA UN Number: 1789 Hazard Class: 8 Packing Group: III

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xi

Indication of Danger: Irritant.

R: 36/37/38

Risk Statements: Irritating to eyes, respiratory system and skin.

S: 26

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Irritant.

Risk Statements: Irritating to eyes, respiratory system and skin.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2010 Sigma-Aldrich Co. License granted to make unlimitedpaper copies for internal use only.