Safety Data Sheet
Revision date: 5-11-2015

1. Identification

Product identifier BleachTech Muriatic Acid
Other means of identification
Synonyms Hydrochloric acid; HCl solution; Aqueous hydrogen chloride
Recommended uses Process chemical, metal cleaning, water purification, petroleum industry
Manufacturer/Importer/Supplier/Distributor Information
Company name BleachTech LLC
Address 320 Ryan Rd.
Seville, Ohio 44273
Telephone 1-330-769-5000
Company name BleachTech LLC
Address 2020 Bessemer Rd
Petersburg, VA 23805
Telephone 1-804-863-2222
Website bleachtech.com
Emergency phone number 1-330-769-5000 (24 hours)

2. Hazard(s) identification

Label elements

Signal word DANGER
Hazard statement Harmful if swallowed.
Causes severe skin burns and eye damage.
Causes serious eye damage.
May cause respiratory irritation.
Precautionary statement
Prevention Do not breathe mist, spray, or vapors.
Wash exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear eye protection, face protection, protective clothing protective gloves.
Response IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor/…
Wash contaminated clothing before reuse.
Storage Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Disposal Dispose of contents/container to Comply with applicable regulations.

NFPA classification (scale 0-4):
Health 3
Fire 0
Reactivity 0

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Hydrogen chloride (HCl)	7647-01-0	9-36
Water (H_2O)	7732-18-5	Balance

4. First-aid measures

Inhalation	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation/Automatic External Defibrillator) and CALL FOR EMERGENCE SERVICES IMMEDIATELY.
Skin contact	Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing and shoes before ATTENTION reuse. Discard footwear that cannot be decontaminated. GET MEDICAL IMMEDIATELY.
Eye contact	Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.
Ingestion	Never give anything by mouth to an unconscious of convulsive person. If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.
General information	NOTE TO PHYSICIAN: The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage. Probable mucosal damage may contraindicate the use of gastric lavage.

5. Fire-fighting measures

Suitable extinguishing media	Use extinguishing agents appropriate (Dry Chemical, Foam, CO2) for surrounding fire.
Specific hazards arising from the chemical	May release toxic gasses.
Fire-fighting equipment/instructions	Keep unnecessary people away, isolate hazard area and deny entry. Wear NIOSH approved positive-pressure self-contained breathing apparatus. Move containers from fire area if it can be done without risk. Avoid inhalation of material of combustion by-products. Stay upwind and keep out of low areas. Cool containers with water.
Sensitivity to mechanical impact	Not sensitive
Sensitivity to static discharge	Not sensitive
Flash point	Not flammable
Hazardous combustion products	Thermal decomposition products or combustion: hydrogen chloride

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear appropriate personal protective equipment recommended in Section 8 of the SDS.
Methods and materials for containment and cleaning up	Evacuation of surrounding area may be necessary for large spills. Completely contain spilled material with dikes, sandbags, etc. Shut off ventilation system if needed. Reprocess or reuse if possible. Neutralize with soda ash or dilute caustic soda. Collect with appropriate absorbent and place into suitable container. Liquid material may be removed with a vacuum truck. Releases should be reported, if required, to appropriate agencies. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800) 424-8802 (USA) or (202) 426-2675 (USA).
Environmental precautions	Keep out of water supplies and sewers. This material is acidic and may lower the pH of the surface waters with low buffering capacity.
Advance planning	Plan in advance for an occupational release and have necessary equipment and neutralization agents on-site.

7. Handling and storage

Precautions for safe handling	Avoid breathing vapor or mist. Do not get in eyes, on skin, of on clothing. Wash thoroughly after handling. When mixing, slowly add to tater to minimize heat generation and spattering.
Condition for safe storage, including any incompatibilities	Store and handle in accordance with all current regulations and standards. Store in rubber-lined steel, acid-resistant plastic or glass containers. Keep containers tightly closed and properly labeled. Store in a cool, dry place. Store in a well-ventilated area. Do not store in aluminum container of use aluminum fittings or transfer lines. Dike and vent storage tanks. Keep separated from incompatible substances (se Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	Hydrogen chloride (hydrochloric acid): 5 ppm (7 mg/m^3) OSHA ceiling, 2 ppm ACGIH ceiling Immediately dangerous to life or health 50 ppm
Appropriate engineering controls	Use closed systems when possible. Provide local exhaust ventilation where vapor or mist may be generated. Ensure compliance with applicable exposure limits.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields. Wear chemical safety goggles with a face shield of chemical splash hood. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Always place pants legs over boots.
Respiratory protection	Where vapor concentration exceeds or is likely to exceed applicable exposure limits, a NIOSH approved respirator with acid gas canister is required. When an air-purifying respirator is not adequate for spills and/or emergencies of unknown concentrations, a NIOSH approved self-contained breathing apparatus or airline respirator with full-face piece is required. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.
Protective material types	**N**eoprene, nitrile, polyvinyl chloride (PVC), rubber, Kappler® CPF3, Tychem®

9. Physical and chemical properties

Appearance	
Physical state	Liquid
Form	Liquid
Color	Colorless
Odor	Pungent odor
Odor threshold	0.3 ppm (causes olfactory fatigue)
pH	< 1 (@ 20^{0}C)
Melting point/freezing point	-29 to 5°F (-34 to –15°C)
Initial boiling point and boiling range	140-221°F (60.0-105°C)
Flash point	Not applicable
Evaporation rate	<1.00 (butyl acetate = 1)
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not available
Flammability limit – lower (%) temperature	Not available
Flammability limit – upper (%)	Not available
Flammability limit – upper (%) temperature	Not available
Explosive limit – lower (%)	Not available
Explosive limit – upper (%)	Not available
Vapor pressure	14.6-80 mmHg @ 20°C
Vapor density	(air=1): 1.3 @ 20°C
Relative density	(water=1): 1.05-1.18
Solubility(ies)	
Solubility (water)	Completely miscible
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not Available
Other information	
Molecular weight	36.46
Chemical family	Acid

10. Stability and reactivity

Reactivity Stable at normal temperature and pressure.

Conditions to avoid Avoid heat, flames, sparks and other sources of ignition. Contact with water may produce a strong exothermic reaction with spattering. Contact with metals may evolve flammable hydrogen gas. Hydrogen chloride may react with cyanide, forming lethal concentrations of hydrocyanic acid.

Incompatible materials metals, alkalis (such as sodium hydroxide), mercuric sulfate, perchloric acid, carbides of calcium, cesium, rubidium, acetylides of cesium and rubidium, phosphides of calcium and uranium, lithium silicide.

Hazardous decomposition products Thermal decomposition products of combustion: hydrogen chloride

Polymerization Will not polymerize

11. Toxicological information

Toxicity data Hydrochloric Acid: Inhalation will cause severe irritation and possible burns with coughing and choking. If inhaled deeply, edema and hemorrhage of the lungs may occur. Levels of 10-35 ppm may cause irritation of throat and 50-100 ppm is unbearable for 1 hour. Inflammation, destruction of nasal passages and breathing difficulties may occur with higher concentrations and/or erosion of teeth. Contact with eyes causes immediate severe irritation with possible burns, permanent visual impairment, or total loss of sight. Contact with fumes or liquid may produce corrosive burns. Dermal exposure also results in irritation, pain, dermatitis, and ulceration. Ingestion may cause immediate burns of the mouth, esophagus, and stomach. Ingestion may cause intense pain, nausea, vomiting, bleeding, circulating collapse, shock and death.

Acute Toxicity

Test	Species	Test results
oral- LD50	rabbit	900 mg/kg
inhalation	rat	1108 ppm/1 hour(s)
inhalation- LC50	rat	3124 ppm/1 hour(s)
Rinsed Draize Test-eye mild	rabbit	5 mg/30 second(s)
Standard Draize Test-skin- mild	human	4%/24 hour(s)

Medical conditions aggravated by exposure Respiratory system (including asthma and other breathing disorders)

12. Ecological information

Ecotoxicity

Fish toxicity	LC50 (1 to 2 hour survival time)	Goldfish	178 mg/L
	LC50	Shrimp	100-300 mg/L
	LC50 (static)	Bluegill	3.6 mg/L 48 hour(s)

This material is believed to be toxic to aquatic life.

Biodegradation This material is inorganic and not subject to biodegradation.

Persistence This material is believed not to persist in the environment. This material is believed to exist in the disassociated state in the environment. SOIL: Hydrogen chloride will sink into the soil. The acid will dissolve some soil material (in particular, anything with a carbonate base) and will be somewhat neutralized. The remaining portion is thought to transport downward to the water table. Water: Dissociates almost completely and will be neutralized by natural alkalinity and carbon dioxide.

Bioconcentration This material is believed not to bioaccumulate

13. Disposal considerations

Disposal instructions Reuse or reprocess if possible. Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262.

Hazardous waste code Hazardous Waste Number(s): D002.

14. Transport information

DOT

UN number	UN 1789
UN proper shipping name	Hydrochloric acid solution
Transport hazard class(es)	8
Packing group	II
Marine pollutant	Yes
Dot hazardous substance(s)	Hydrochloric acid 5000 lb(s) (2270 kg(s))

Canadian transportation of dangerous goods

Shipping name	Hydrochloric acid solution
UN number	UN1789
Class	8
Packing group/risk group	II

15. Regulatory information

U.S. regulations

CERCLA sections 102a/103 hazardous substances (40 CFR 302.4)

Hydrogen chloride	5000 LBS RQ (liquid)

SARA title III section 302 extremely hazardous substances (40 CFR 355.30)

Hydrogen chloride	500 LBS TPQ (gas)

SARA title III sections 311/312 hazardous categories (40 CFR 370.21)

Acute	Yes
Chronic	No
Fire	No
Reactive	No
Sudden release	No

SARA title III section 313 (40CFR 372.65)

Hydrogen chloride	Aerosol form only
SARA title III section 313 (40CFR 372)	This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372. Refer to Section 3.

OSHA process safety (29 CFR 1910.119)

Hydrogen chloride	5000 lbs TO (gas)
FDA	This material has Generally Recognized as Safe (GRAS) status under specific FDA regulations. Additional information is available from the Code of Federal Regulations (CFR) which is accessible of the FDA's website.

State regulations

California Proposition 65	This product is not known to contain any chemicals known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act.	
New Jersey worker and community right to know		
Reporting requirement	Hydrogen chloride	7647-01-0
Right to know hazardous Substance list	Hydrogen chloride	7647-01-0
Special health hazard substance list	Hydrogen chloride	7647-01-0
Pennsylvania right to know		
Reporting requirement	Hydrogen chloride	7647-01-0
Hazardous substance list	Hydrogen chloride	7647-01-0
Environmental hazardous substance list	Hydrogen chloride	7647-01-0
Special hazardous substance list	not regulated	

Canadian regulations

WHMIS classification	E

National inventory status

U.S. inventory (TSCA)	All the components of this substance are listed on or are exempt from the inventory.
TSCA 12(b) export notification	not listed
Canada inventory (DSL/NDSL)	All components of this product are listed on the DSL.
Europe inventory (EINECS)	Yes

16. Other information

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