Safety Data Sheet

Muriatic Acid

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	Muriatic Acid
Synonyms:	N/A
CAS No:	7647-01-0
1.2 Product Use:	Solvent
1.3 Company Name:	**SpecChem**
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	**VelocityEHS** 1-(800)255-3924 (North America) +1-813-248-0585 (International) 1-300-954-583 (Australia) 0-800-591-6042 (Brazil) 400-120-0751 (China) 000-800-100-4086 (India) 800-099-0731 (Mexico)
Date of Last Revision:	January 23, 2015
Date of Current Revision:	July 1, 2018

SECTION 2 – HAZARDS IDENTIFICATION

EU and GHS Symbols:

Signal Word: Danger

2.2 Label Elements:

GHS Hazard Classifications:
Corrosive to metals Category 1
May be harmful if swallowed Category 5
Harmful if inhaled Category 4
Causes severe skin burn and eye damage. Category 1B
Causes serious eye damage Category 1
May cause respiratory irritation Category 3

Hazard Statements:
May be harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage. Maybe cause respiratory irritation.

Precautionary Statements:
Do not breathe mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well ventilated area. Wear protective gloves/eye protection/face protection.

Response Statements:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated

clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Storage Statements: Store in a well ventilated place. Keep container tightly closed. Store locked up.

Disposal Statements: Dispose of contents/container in accordance with local/national regulations.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.
Hydrochloric Acid	15-35%	7647-01-0

Substance classified with a health or environmental hazard. Substance with a workplace exposure limit.
Synonyms: Hydrochloric Acid, Muriatic Acid, Hydrogen chloride.

SECTION 4 – FIRST AID MEASURES

GENERAL
Move victim to fresh air. Call 911 or emergency medical service. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. Keep victim warm and quiet. Effect of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

INHALATION
Move victim to fresh air. Call emergency medical care. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.

EYE CONTACT
Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart. Remove contact lenses if present and easy to do – continue rinsing. Seek medical attention.

SKIN CONTACT
Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Get medical attention if irritation persists.

INGESTION
If accidently swallowed obtain IMMEDIATE MEDICAL ATTENTION. Keep at rest. Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed.
OVERVIEW
Effect of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
Indication of immediate medical attention and special treatment needed.
Harmful if inhaled. May cause respiratory irritation. Causes serious eye damage. Causes severe skin burns and eye damage. Harmful if swallowed.

SECTION 5 – FIRE FIGHTING MEASURES

Recommended Extinguishing Media: Regular dry chemical, carbon dioxide, fine water spray, regular foam.
Unsuitable Extinguishing Media: High volume water jet.
Special Hazards Arising from the Substance or Mixture: Thermal decomposition releases toxic and corrosive gas (Hydrogen chloride, Chlorine). Reacts with metal producing flammable/explosive hydrogen gas. Heating can cause expansion or decomposition leading to violent rupture of containers. Do not breathe mist/vapors/spray.
Advice for Firefighters: Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars etc.). Substance may react with water (some violently), releasing corrosive and/or toxic gases and runoff. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated or if contaminated with water. Reaction with water may generate much heat that will increase the concentration of fumes in the air. Fire will produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. Do not allow contaminated extinguishing water to enter the soil, groundwater or surface waters. **ERG Guide No. 157**

SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

Personal Precautions, Protective Equipment and Emergency Procedures:
Evacuate all unprotected personnel and keep people away from and upwind of spill/leak. Put on protective equipment (see Section 8). Avoid direct contact with skin, eyes and clothing. Do not breathe vapor or fumes. Ensure adequate ventilation.

Environmental Precautions:
Do not allow spills to enter drains or watercourses.

Methods and Material for Containment and Cleaning Up:
CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number in Section 1. Shut off the source of the leak if conditions are safe. Neutralize with lime or soda ash or absorb with dry earth, sand or other non-combustible material, and dispose waste appropriately. Wash area down with excess water to remove residual material.

SECTION 7 - HANDLING AND STORAGE

Precautions for Safe Handling:
Use protective equipment. Provide adequate ventilation. Do NOT add water to acid. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

Conditions for Safe Storage, Including any Incompatibilities:
Storage facilities must be properly designed and diked to contain any spillage. Store tightly closed in a dry, cool and well-ventilated place. Protect containers from heat, physical damage, ignition sources and incompatible materials.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Control Parameters

CAS No.	Material	Source	Value
7647-01-0	Hydrochloric Acid	OSHA	Ceiling: 5 ppm (7mg/m3)
		ACGIH	Ceiling: 2 ppm
		NIOSH	Ceiling: 5 ppm (7mg/m3)

Individual protection measures, such as personal protective equipment

RESPIRATORY
Use NIOSH/MSHA approved respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits.

EYES
Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.

SKIN:
Chemical resistant clothing such as coveralls/apron boots should be worn. Chemical impervious gloves. Emergency eyewash station should be in close proximity.

ENGINEERING CONTROLS:

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

OTHER WORKPLACE PRACTICES:
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly removed soiled clothing and wash thoroughly before reuse.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Water-white to straw yellow liquid
Odor: Pungent
Odor Threshold: Not measured
pH: 1
Melting point/freezing point: -51F to -22F
Initial boiling point and boiling range: 158 to 183 F
Flash point: Not applicable
Evaporation rate (Ether = 1): < 1
Flammability (solid, gas): Not applicable
Upper/lower flammability or explosive limits: Not measured
Vapor pressure (mmHg): 16-70 (@77F)
Vapor Density: 1.26
Specific Density: 1.05-1.17
Solubility in Water: Complete
Partition coefficient n-octanol/water (Log Kow): Not measured
Auto-ignition temperature (°C): Not measured
Decomposition temperature: Not measured
Viscosity (cSt): Not measured
VOC %: Not measured
Other information: No other relevant information.

SECTION 10 – STABILITY AND REACTIVITY

REACTIVITY: Hazardous polymerization will not occur.
STABILITY: Stable under normal circumstances.
POSSIBILITY of HAZARDOUS REACTIONS: Exothermic reaction with incompatible materials.
CONDITIONS TO AVOID: Excessive heat and open flame.
IMCOMPATIBLE MATERIALS: Strong bases, metals, metal oxides, hydroxides, amines, carbonates and other alkaline materials, concentrated sulfuric acid, strong oxidizing agents, perchlorates, nitrates, peroxides, carbides, hydrides, cyanides, sulfides, sulfites, permanganates, salts of oxyhalogenic acids, semimetallic oxide, semimetallic hydrogen compounds, aldehydes, vinylmethyl ether.
HAZARDOUS DECOMPOSITION PRODUCTS: High temperatures produce toxic hydrogen chloride fumes and will react with water or steam to produce heat and toxic and corrosive fumes.

SECTION 11 – TOXICOLOGY INFORMATION

Acute Toxicity:

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LC50, ppm/1hr
Hydrochloric Acid (7647-01-0)	900.00, Rabbit	5,010.00, Rabbit	78100, Mouse	No data available	3,124.00, Rat

Acute Toxicity (mouth): May be harmful if swallowed
Acute Toxicity (skin): Not applicable
Acute Toxicity (inhalation): Harmful if inhaled.
Skin corrosion/irritation: Causes severe skin burns and ulceration.
Eye damage/irritation: Causes serious eye damage.
Sensitization (respiratory): Not applicable
Sensitization (skin): Not applicable
Germ Toxicity: Not applicable
Carcinogenicity: Not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.
Reproductive Toxicity: Not expected to cause reproductive or developmental effects.
Specific target organ systemic toxicity: May cause respiratory irritation.
Aspiration hazard: Not applicable

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity – Toxic to aquatic life. Acidic substances leading to a lower pH.

Ingredient	**96 hr LC50 fish, mg/l**	**48 hr EC50 crustacea mg/l**	**EC50 algae, mg/l**
Hydrochloric Acid (7647-01-0)	282.00 Gambusia affinis	260.00 Crangon crangon	Not available

Persistence and degradability: There is no data available on the preparation itself.
Bioaccumulative potential: Not measured.
Mobility in soil: No data available.
Results of PBT and vPvB assessment: This product contains no PBT/vPvB chemicals.
Other adverse effects: No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste treatment methods:
Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet, advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.

Waste from material:
The waste determination should be made in discussion between the user and the waste disposal company.

Container Management:
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:
This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number:	UN1789
Proper Shipping Name:	Hydrochloric acid.
Hazard Class Number and Description:	Class 8
Packing Group:	II
DOT Label(s) Required:	8
14.2 Environmental Hazards:	
Marine Pollutant:	The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).
14.3 Special Precaution for User:	None
14.4 International Air Transport Association Shipping Information (IATA):	This product is considered as dangerous goods.
14.5 International Maritime Organization Shipping Information (IMO):	
UN Identification Number:	UN1789
Proper Shipping Name:	Hydrochloric acid
Hazard Class Number and Description:	Class 8
Packing Group:	II

SECTION 15 – REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory.

WHMIS Classification: D2B E

OSHA Regulatory Status: This material is considered hazardous by the OSHA Hazard Communicated Standard (29 CFR 1910.1200)

US EPA Tier II Hazards:

Fire: No	Immediate (Acute): Yes
Sudden Release of Pressure: No	Delayed (Chronic): Yes
Reactive: No	

SARA 302 Extremely Hazardous Substance/RQs (lbs): Yes (5,000 lbs)
SARA 311/312 Chemicals and RQs (lbs) (>0.1%): Yes (5,000.00)
SARA 313 (TRI): Yes
OSHA PSM (29 cfr 1910.119): No
TSCA: Hydrochloric Acid

State Regulations:
NJ RTK Substances (>1%) – Listed
Penn RTK Substances (>1%) – Listed
California Prop 65 – Not Listed

SECTION 16 – OTHER INFORMATION

Date of Printing: July 1, 2018

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET