



SENTRY INDUSTRIES INC.



MATERIAL SAFETY DATA SHEET

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: **Muriatic Acid, Hydrochloric Acid**
 Chemical Name/Synonyms: Muriatic Acid, Hydrochloric Acid, Hydrogen Chloride
 Manufacturer: Sentry Industries 5687 N.W. 36th Ave. Miami Fl. 33142
 Telephone: (305) 638-0800, (954) 527-4000, (800) 227-2047
 24 Hr. Emergency Response#: 305-968-3827, Chem-Tel 800-255-3924

SECTION 2 COMPOSITION/INGREDIENTS

<u>Ingredient (s):</u>	<u>Percent</u>	<u>CAS NO.</u>
Hydrogen Chloride (HCL)	31.4% (20 ^o Baume')	7647-01-0
Water	Balance	7732-18-5

Toxic fumes can be generated by contact with Alkalis, oxidants and many metals which cause spontaneous temperature rise. Severe and painful burns upon contact.

SECTION 3 HAZARDS IDENTIFICATION

ACGIH – TLV: 5 ppm

Eye Contact: Severe irritation, corrosive-redness-chemical burns-pain-blurred vision.

Skin Contact: Irritant, corrosive- reddening chemical burns of skin.

Inhalation: Irritation to respiratory tract-pungent-sore throat coughing shortness of breath. Concentrations above 50 ppm will damage the upper respiratory tract.

Ingestion: Can cause corrosion of mucous membranes, perforation of esophagus and stomach, and laryngeal edam, may lead to convulsion, coma, and death.

SECTION 4 FIRST AID PROCEDURES

Emergency and First Aid Procedures:

Eye Contact: Immediately flush eyes with water for at least 15 minutes, including under eyelids. Get medical attention.

Skin Contact: Remove contaminated clothing. Flush affected area with large amounts of water preferably using a safety shower. Get medical attention.

Inhalation: Remove to fresh air, keep in upright position, provide oxygen if breathing is difficult. Give artificial respiration if not breathing, Get medical attention.

Ingestion: Rinse mouth with water. Do not induce vomiting. Drink large quantities of water or milk of magnesia or limewater. Do not give anything by mouth to an unconscious person. Get medical attention.

Additional Information: Concentrations above 1300 ppm are believed to be immediately dangerous to life and health.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point:	Non- flammable
Flammable Limits:	Non-flammable
Extinguishing Media:	Use spray, fog, and foam, dry chemical or CO2 agents suitable for surrounding fire.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and full protective clothing. Avoid inhalation of fumes and body contact.
Unusual fire & Explosion Hazards:	Flammable Hydrogen gas can be generated by reaction with many metals.
Neutralization Information:	This material can be neutralized with an alkali such as soda ash or sodium bicarbonate.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is Released or Spilled:

Contain spills or leaks in plastic containers, dikes, ponds, or retention areas where spillage can be recovered or neutralized with soda ash or an alkaline solution. Do not allow material to enter sewers, streams, ponds or storm conduits. Consider recovery if the proper equipment is available. Personnel involved in the cleaning must be equipped with NIOSH approved respirator protection, rubber boots, gloves, and clothing to avoid body contact. Additional Information: Reportable quantity = 5000 lbs. (2270 kg)

Do not absorb spills with flammable materials such as sawdust or combustible absorbents. Contact your supplier for assistance. Plan in advance for such an incident and have necessary equipment available.

SECTION 7 HANDLING AND STORAGE

Handling and storing:	Store in compatible equipment (acid proof). Provide ventilation. Store away from alkaline materials, oxidizing agents and base metals. Store in diked areas that meet Federal, State, and local regulations. If splashed with this material, remove contaminated clothing and thoroughly wash with water. Drench contaminated material with plenty of water.
Other Precautions:	Keep metals away from storage areas as contact may cause hydrogen generation.
Additional Information:	Only trained personnel should handle this material and someone should be in attendance throughout any loading, unloading or transfer operation.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respirator Protection:	Use NIOSH approved respirator protection suitable for acid gases. Self-contained breathing apparatus should be used for strong concentrations.
Ventilation:	Local exhaust ventilation - personnel should not be exposed to irritating effects of the fumes. Provide exhaust ventilation to meet TLV requirement. Due to the low freeze point this material is normally stored outside of buildings.
Protective Gloves:	Rubber Latex Plastic.
Eye/Face Protection:	Chemical splash proof goggles and face shields.
Other Protective Equipment:	Rubber boots and clothing to avoid body contact such as rubber apron or rain suit. Eye wash and safety showers should be available in handling areas.
Additional Information:	Avoid body contact and inhalation of fumes.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Baume'	20 ⁰	Weight Percent HCl:	31.4
Boiling Point ⁰ F:	182	Freezing Point ⁰ F:	-63.4
Vapor Pressure(mm Hg) @ 20 ⁰ C:	25	Vapor Density (Air = 1):	1.3
Specific Gravity 60/60 ⁰ F:	1.160	Percent Volatile By Volume (%):	100
Solubility In Water:	Complete	Evaporation Rate:	< 1
Appearance and Odor:	Colorless to light yellow, fuming liquid pungent and suffocating odor.		

SECTION 10 STABILITY AND REACTIVITY

Stability:	Stable when properly stored and handled.
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Incompatibility (Materials to Avoid): Base metals, metaloxides, alkaline materials, carbonates, amines, and hydroxides.
 Hazardous Decomposition Products: Hydrogen chloride gas, hydrogen, chlorine gas.
 Hazardous Polymerization: Will not occur
 Conditions to Avoid: Heat sources - contact with metals or alkalis- body contact.

SECTION 11 TOXICOLOGICAL INFORMATION

Permissible Exposure Limit (PEL), Threshold Limit Value (TLV): TWA - 5 ppm and 5 ppm ceiling or 7mg/CU.M.
 Maximum acceptable concentration 5 ppm or 7 mg/CU.M. ceiling.
 LC50 INHL (rat) = 3124 ppm
 LD50 ORAL (rabbit) = 900mg/kg
 Local effects: Corrosive: inhalation, skin contact, eye and ingestion hazards.
 Carcinogen Status: None of the components present in concentration greater than or equal to 0.1% are list by IARC, NTP, OSHA, or ACGIH as a carcinogen.

SECTION 12 ECOLOGICAL INFORMATION

No information available

SECTION 13 DISPOSAL CONSIDERTIONS

Waste Disposal Methods: Disposal is contingent upon allowable salt concentrations and the pH in the effluent stream.
 Dispose of waste materials according to Federal State and Local regulations.
 Additional Information: Reportable quantity = 5000 lbs. (2270 kg)

SECTION 14 TRANSPORTATION INFORMATION

DOT Proper Shipping Name: Hydrochloric Acid Solution
 DOT Identification #: UN1789
 DOT Hazard Class: Class 8 (Corrosive)
 Packaging Group: PG II
 Placards Required: Corrosive, Bulk - UN 1789
 RQ: 5000 pounds
 Packaging: R-34-37, S 2-26
 DOT Emergency Guide No: 157
 Sentry 24 hr Emergency #: 305-968-3827
 Emergency Phone: Chem-Tel 800-255-3924

SECTION 15 REGULATORY INFORMATION

CERCLA Hazardous Substance: Yes RQ: 5000 lbs.
 SARA Toxic Chemical: No EPA Registration Number: N/A
 SARA Extremely Hazardous Substance: No (Hydrogen Gas only)

NSF Maximum Use Level for Potable Water (Standard 60): N/A
 TSCA (Toxic Substance Control Act), 40 DFR 710: Sources of all raw materials used in this mixture assure that all chemical ingredients present are in compliance with Section 8(b) Chemical Substance Inventory, or are otherwise in compliance to TSCA.

National Fire Rating System (NFPA): Health (Blue) - 3 Fire (Red) - 0 Reactivity (Yellow) - 0
 Hazard Material Identification System (HMIS): Health (Blue) - 3 Fire (Red) - 0 Reactivity (Yellow) - 0

SECTION 16 OTHER INFORMATION

4/4/08 - Revision to formatting for GHS compliance.

The data in this Material Data Sheet relates only to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control, it should not be taken as a warranty or representation for which Sentry Industries assume legal responsibility. This information is provided solely for your consideration, investigation, and verification. For additional information, contact our technical service department.