SENTRY INDUSTRIES INC.

MATERIAL SAFETY DATA SHEET

SECTION I IDENTIFICATION

Trade Name: **Hydrochloric Acid, Muriatic Acid**
Chemical Name/Synonyms: Hydrochloric Acid, Muriatic Acid**,** Hydrogen Chloride
C.A.S. Registry #: 7647-01-0
Chemical Family: Acid
Formula: HCl
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 II INGREDIENTS & HAZARDS

Ingredient (s):	
Baume' Degree	20^0
Hydrogen Chloride %	31.4
Impurities	Trace
Balance	Water

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 III PHYSICAL DATA

Baume'	20^0
Boiling Point ^{0}F:	182
Freezing Point ^{0}F:	-63.4
Vapor Pressure(mm Hg) @ 20^0C:	25
Vapor Density (Air = 1):	1.3
Specific Gravity $60/60^0$F:	1.160
Percent Volatile By Volume (%):	100
Weight Percent HCl:	31.4
Solubility In Water:	Infinite

Appearance and Odor: Colorless to light yellow, fuming liquid pungent and suffocating odor.
Molecular Weight of HCl is 36.47

SECTION IV FIRE AND EXPLOSION HAZARD

Flash Point: Non- flammable
Flammable Limits: Non-flammable
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
Extinguishing Media: Use spray, fog, and foam, dry chemical or CO2 agents suitable for surrounding fire.
Special Fire Fighting Wear self-contained breathing apparatus and full protective clothing. Avoid inhalation of

Procedures:	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 V HEALTH HAZARD DATA

	Effects of Overexposure:	Emergency and First Aid Procedures:
Eye Contact:	Severe irritation, corrosive-redness-chemical burns-pain-blurred vision.	Immediately flush eyes with water for at least 15 minutes, including under eyelids. Get medical attention.
Skin Contact:	Irritant, corrosive- reddening chemical burns of skin.	Remove contaminated clothing. Flush affected area with large amounts of water preferably using a safety shower. Get medical attention..
Inhalation:	Irritation to respiratory tract-pungent-sore throat coughing shortness of breath. Concentrations above 50 ppm will damage the upper respiratory tract.	Remove to fresh air, keep in upright position, provide oxygen if breathing is difficult. Give artificial respiration if not breathing, Get medical attention.
Ingestion:	Can cause corrosion of mucous membranes, perforation of esophagus and stomach, and laryngeal edam, may lead to convulsion, coma, and death.	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 VI TOXILOGICAL DATA

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
Carcinogen Status: None of the components present in concentration greaten than or equal to 0.1% are list by IARC, NTP, OSHA, or ACGIH as a carcinogen.
Local effects: Corrosive: inhalation, skin contact, eye and ingestion hazards.

SECTION VII REACTIVITY DATA

Stability:	Stable when properly stored and handled.
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 VIII SPILL OR LEAK PROCEDURES

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.

Waste Disposal Methods: Disposal is contingent upon allowable salt concentrations and the pH in the effluent stream. Dispose in accordance with Federal, State, and local regulations.
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 IX SPECIAL PROTECTION INFORMATION

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 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 X TRANSPORTATION INFORMATION

DOT Proper Shipping Name:	Hydrochloric Acid Solution
DOT Hazard Class:	Class 8 (Corrosive)
DOT Identification #:	UN1789
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 XI REGULATORY INFORMATION

CERCLA Hazardous Substance: Yes
RQ: 5000 lbs.
SARA Toxic Chemical: No
SARA Extremely Hazardous Substance: Hydrogen Gas only

SECTION XII HANDLING PRECAUTIONS

Precautions to be taken in 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.