



BJ SERVICES COMPANY
MATERIAL SAFETY DATA SHEET

Region
USA

SECTION I - GENERAL INFORMATION

PRODUCT NAME: **Hydrochloric Acid (HCl)**
ITEM NUMBER: 100092, 100088, 464950, 398000-398007, 398166
CHEMICAL DESCRIPTION: Inorganic acid
PRODUCT USE: Acid - HCL
SUPPLIER: BJ Services Company
ADDRESS: 11211 FM 2920
Tomball, TX 77375
**EMERGENCY TELEPHONE NUMBER (800)424-9300 for CHEMTREC
(703)527-3887 for International**
PREPARED BY: BJ Services Environmental Group
(281)351-8131
DATE PREPARED: June 17, 2002
Supersedes: September 21, 2000

HMIS HAZARD INDEX

HEALTH: 3
FLAMMABILITY: 0
REACTIVITY: 2
PERSONAL PROTECTION: j

SECTION II - HAZARDOUS COMPONENTS

HAZARDOUS COMPONENTS	CAS #	PERCENT	HAZARD
Hydrochloric acid	7647-01-0	3.0 – 36.0	Corrosive

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT (METHOD): None
UPPER EXPLOSION LIMIT(% BY VOL): N.A.
LOWER EXPLOSION LIMIT(% BY VOL): N.A.
AUTO-IGNITION TEMPERATURE: N.A.
EXTINGUISHING MEDIA: Hydrochloric acid does not burn. Use appropriate media for surrounding fire.
SPECIAL FIRE FIGHTING PROCEDURES: Equipment normally used for other hazards present should be used.
EXPLOSION DATA: Hydrochloric acid will react with most metals to evolve hydrogen gas which when mixed with air may result in fire or explosion if ignited.
HAZARDOUS COMBUSTION PRODUCTS: Hydrogen gas, chlorine gas

SECTION IV - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Skin and eye contact, inhalation, ingestion

ACUTE OVEREXPOSURE EFFECTS:

SKIN CONTACT:	Liquid or concentrated vapors can rapidly cause burns. Repeated or prolonged contact with dilute solution, and concentrated vapors can cause irritation and dermatitis.
SKIN ABSORPTION:	Not absorbed by skin.
EYE CONTACT:	Liquid or concentrated vapors can cause eye irritation, severe burns and permanent damage including blindness.
INHALATION:	Mist and vapors can cause irritation of respiratory tract, with burning, choking, coughing, headaches and rapid heartbeat. Levels of 10 to 35 ppm can cause irritation of throat and 50 - 100 ppm is nearly unbearable for 1 hour. Inflammation, destruction of nasal passages and breathing difficulties can occur with higher concentrations and may be delayed in onset. 1000-2000 ppm can be fatal.
INGESTION:	Can cause severe burns of mouth, esophagus and stomach. Nausea, pain and vomiting frequently occur. Depending on the amount swallowed, holes in the intestinal tract, kidney inflammation, shock and death can occur.

CHRONIC OVEREXPOSURE EFFECTS: Irritation of mucous lining and erosion of the teeth. Persons with asthma, bronchitis, emphysema and other lung conditions and chronic nose, sinus or throat conditions may have those conditions aggravated by exposure to HCl.

EXPOSURE LIMITS:

HAZARDOUS COMPONENT	ACGIH TLV	OSHA PEL
Hydrochloric acid	5 ppm	5 ppm

CARCINOGENICITY, REPRODUCTIVE EFFECTS:
Not listed as carcinogenic – IARC, NTP, or OSHA

TERATOGENICITY, MUTAGENICITY:
No effects listed.

TOXICITY STUDIES:

LD(50)	900 mg/kg (oral rabbit)
LC(50)	3124 ppm/1hr (inhal rat)

SECTION V - FIRST AID PROCEDURES

FOR EYES:	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
FOR SKIN:	Immediately drench the victim with water and remove exposed clothing as soon as possible. If burns are severe or extensive, do not move the victim, call for emergency medical care.
FOR INHALATION:	Remove victim to fresh air and administer 100% oxygen for 15 to 30 minutes. If breathing has stopped, begin artificial respiration and treat for shock. Get medical attention immediately.

FOR INGESTION: Drink large amounts of lime water or milk of magnesia. Use plain water if these are not available. DO NOT use sodium bicarbonate. Spontaneous vomiting may occur, but do not attempt to induce. Get immediate medical help.

SECTION VI - PHYSICAL DATA

APPEARANCE AND ODOR: Clear, colorless to slightly yellow fuming liquid. Sharp, pungent and irritating odor.

SPECIFIC GRAVITY: 1.16

VAPOR PRESSURE: Approximately 13 mm Hg @ 20°C

VAPOR DENSITY (air=1): 1.3 (HCl gas)

EVAPORATION RATE: Depends on barometric pressure and % HCl

BOILING POINT: 110°C

FREEZING POINT: N.E.

SOLUBILITY IN H₂O: 82.3 gm/100 gm H₂O at 0°C

pH: < 1

SECTION VII - REACTIVITY DATA

CHEMICAL STABILITY: Stable

INCOMPATIBLE MATERIALS: Metals

HAZARDOUS POLYMERIZATION: Does not polymerize

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen gas, chlorine gas

SECTION VIII - SPECIAL/PERSONAL PROTECTION

VENTILATION: The use of mechanical ventilation is recommended whenever this product is used in a confined space. Where engineering controls are not feasible, assure use is in an area where there is natural air movement.

RESPIRATORY PROTECTION: Cartridge or canister respirator - Acid Gas

PROTECTIVE GLOVES: Rubber

EYE PROTECTION: Goggles

OTHER PROTECTIVE EQUIPMENT: Apron. Eyewash bottles or other rinsing agent should be easily accessible.

SECTION IX - HANDLING PRECAUTIONS

LEAK AND SPILL PROCEDURES: Evacuate area where concentrated fumes are present. Cleanup personnel to wear full protective gear. Completely contain spilled acid with dikes, etc., and prevent run-off into ground and surface waters or into sewers. Product will dissociate in water affecting the pH and will cause aquatic toxic effect similar to chlorine. Neutralize with soda ash or dilute caustic soda.

WASTE DISPOSAL: If this product becomes a waste it is hazardous and classed as, Corrosive waste- D002, under 40 CFR 261. Always dispose of according to all local/state/and federal regulations.

HANDLING & SPECIAL EQUIPMENT: Avoid contact with eyes, skin and clothing. Avoid breathing fumes. Avoid contact with metals.

STORAGE REQUIREMENTS: Store in non-metal containers.

SECTION X - REGULATORY INFORMATION

SHIPPING INFORMATION

PROPER SHIPPING NAME: Hydrochloric acid
HAZARD CLASS: 8
UN/NA NUMBER: UN 1789
PACKING GROUP W/ "PG": PG II
SUBSIDIARY RISK: N.A.
REPORTABLE QUANTITY (RQ): Dependant on concentration
EMERGENCY RESPONSE GUIDE #: 157

ENVIRONMENTAL INFORMATION

SARA TITLE III

SECTION 302/304 This product does not contain ingredients listed as an Extremely Hazardous Substance.
SECTION 311/312 Immediate
SECTION 313 This product contains the following ingredients (at a level of 1% or greater) which appear on the List of Toxic Chemicals:
Hydrochloric acid

OTHER REGULATORY INFORMATION

TSCA INVENTORY: All of the components in this product appear on the TSCA inventory.
CALIFORNIA PROP 65: None of the chemicals on the current Proposition 65 list are known to be present in this product.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.