

HYDROCHLORIC ACID 20% AQUEOUS

Section 1 - Chemical Product and Company Identification

SDS Name: Hydrochloric Acid 20% Aqueous

Catalog Numbers: SO-356

Company Identification: ROWLEY BIOCHEMICAL
10 ELECTRONICS AVENUE
DANVERS, MA 01923

For information, call: 978-739-4883

Emergency Number: 800-424-9300

For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications Category HEALTH HAZARDS

H302-Acute Oral Toxicity: 4

H313-Acute Dermal Toxicity: 5

H332-Acute Inhalation toxicity: 3

H314-Skin Corrosion/Skin Irritation: 1

H318-Eye damage/Irritation: 1

PHYSICAL HAZARDS Category

H290-Corrosive to Metals: 1

ENVIRONMENTAL HAZARD

Acute environmental Hazards: Not classified

Chronic environmental Hazards: Not classified

Pictogram or Hazard Symbols



Danger! Causes severe skin burns and eye damage.

Warning! May be corrosive to metals



Warning! Harmful if swallowed.



Warning! May be harmful in contact with skin.

Precautionary Statement Prevention.

P234 Keep only in original container.

P261 Avoid breathing fumes/mist/vapors.

P264 Wash thoroughly after handling.

P270 Do not eat, drink, or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves, clothing, and eye and face protection.

P301 + P312 IF SWALLOWED, call a physician if you feel unwell.

P301 + P330 + P331 IF SWALLOWED, rinse mouth. DO NOT INDUCE VOMITING.

P303 + P361 + P353 If on skin (or hair) take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 IF INHALED, remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a physician if you feel unwell.

P330 Rinse mouth.

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

P405 Store locked up.

P406 Store in corrosive resistant container.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7647-01-0	Hydrochloric Acid	20
7732-18-5	Water	80

Section 4 - First Aid Measures

Eye Exposure: Corrosive to naked eye; in case of contact flush eyes well for 15 minutes, lifting the lower and upper eyelids occasionally. May cause permanent eye damage or blindness. Seek medical attention.

Dermal Exposure: Obtain medical attention: Corrosive to exposed skin. Flush skin well with water for 15 minutes, wash with soap and water. Remove affected clothing, get medical attention. May cause deep, penetrating burns.

Oral Exposure: Will cause severe burns to the mouth and severe and permanent damage to the digestive tract. Causes gastrointestinal burns and perforation of the digestive tract. Get Medical Attention immediately. Do not induce vomiting; give large quantities of water.

Inhalation Exposure: If inhaled, remove to fresh air. If not breathing give artificial respiration. Seek medical attention. Inhalation of vapors may cause coughing choking, inflammation of the nose, throat, and upper respiratory tract. In severe cases, may pulmonary edema, circulatory failure, and death.

Section 5 - Fire Fighting Measures

NFPA HEALTH **3** FLAMMABILITY **0** REACTIVITY **0**

Extinguishing media: Water spray. Neutralize with soda ash or slaked lime

Special fire fighting procedures: Wear chemically retardant gear and NIOSH approved self-contained breathing apparatus. Thermal decomposition produces irritating and toxic fumes. Extreme heat or contact with metals can release flammable hydrogen gas.

Toxic gases released: Hydrogen chloride, hydrogen gas.

Section 6 - Accidental Release Measures

Methods for Cleaning up: Ventilate area of leak or spill. Stop leak if possible to do so without risk. Clean-up personnel should wear protective clothing and NIOSH approved respirator. Dike and cover the contaminated areas with absorbent, non-combustible material such as earth, sand, or vermiculite. Neutralize with alkaline material such as soda ash or lime. Do not use combustibles. Do not flush to sewer.

Section 7 - Handling and Storage

Wash thoroughly after handling. Remove contaminated clothing and wash before re-use. Do not breathe mist or vapor. Do not expose eyes, skin, or clothing. Keep container closed tightly. Avoid contact with combustibles. Do not use with metal tools or items. Use with adequate ventilation or respiratory protection. Do not store near combustibles or in direct sunlight. Store in a cool, dry, well-ventilated area away from incompatible substances. Separate from metals, alkali, and organics. Residue in empty containers may still be hazardous.

Section 8 - Exposure Controls, Personal Protection

Respiratory protection: Wear NIOSH/MESA approved full or half face piece (with goggles) respiratory protective equipment to avoid exposure to iodine vapors above 0.1 ppm. A respiratory protection program complying with requirements of 29 CFR 1910.134 is recommended.

Ventilation: Where adequate ventilation is not available, use NIOSH approved vapor respirator with dust, fume and mist filters. Local ventilation through fume hoods or laminar flow stations is also preferred. Keep fumes away from strong bases.

Personal Protective Equipment:

Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles/ face shield.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Colorless

Odor: Acrid, pungent

pH: ≤ 0.1

CAS#7647-01-0 Hydrochloric Acid

Melting point: -74 °C

Flash point: Non-flammable
Ignition point: Will not ignite
Danger of explosion: Product is not explosive
Vapor Pressure at 15°C, mm Hg: 190 mm Hg at 25 °C
Vapor Density (Air=1): No information
Evaporation Rate (water=1) no information

Boiling Point: 109°C
Decomposition Temperature: > 150 °C
Solubility: Soluble.
Specific Gravity/Density: 1.16
Volatiles, %: 80-85
Solubility in/Miscibility: Completely miscible in water

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to avoid: Excess heat, sunlight, confined spaces.

Hazardous Decomposition Products: Hydrogen chloride fumes, hydrogen gas

Hazardous Polymerization: Will not occur.

Incompatibilities with other materials: Most common metals, strong bases, metal oxides, amines, hydroxides, cyanides, sulfides, sulfites, formaldehyde, and carbonates.

Section 11 - Toxicological Information

CAS# 7647-01-0

LD50/LC50:

Oral Rat: 900 mg/kg

Vapor Mouse: 1108 ppm

Vapor Rat: 3124 ppm

Carcinogenicity: NTP: No IARC: No Z List: No OSHA reg. No

Chronic Effects on Humans:

May cause damage to the following organs: kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, Circulatory System, teeth.

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (corrosive, irritant, permeator), of ingestion.

Hazardous in case of eye contact (corrosive), of inhalation (lung corrosive).

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Corrosive. Causes severe skin irritation and burns.

Eyes: Corrosive. Causes severe eye irritation/conjunctivitis, burns, corneal necrosis.

Inhalation: May be fatal if inhaled. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract. Inhalation of hydrochloric acid fumes produces nose, throat, and laryngeal burning, and irritation, pain and inflammation, coughing, sneezing, choking sensation, hoarseness, laryngeal spasms, upper respiratory tract edema, chest pains, as well as headache, and palpitations. Inhalation of high concentrations can result in corrosive burns, necrosis of bronchial epithelium, constriction of the larynx and bronchi, nasospetal perforation, glottal closure, occur, particularly if exposure is prolonged.

May affect the liver. Ingestion: May be fatal if swallowed. Causes irritation and burning, ulceration, or perforation of the gastrointestinal tract and resultant peritonitis, gastric hemorrhage and infection. Can also cause nausea, vomiting (with "coffee ground" emesis),

diarrhea, thirst, difficulty swallowing, salivation, chills, fever, uneasiness, shock, strictures and stenosis (esophageal, gastric, pyloric). May affect behavior (excitement), the cardiovascular system (weak rapid pulse, tachycardia), respiration (shallow respiration), and urinary system (kidneys- renal failure, nephritis). Acute exposure via inhalation or ingestion can also cause erosion of tooth enamel.

IARC category 3 (Not classifiable for human)

Section 12 - Ecological Information

Bioaccumulation: When released into the soil, this material is not expected to biodegrade. When released into the soil, this material may leach into groundwater.

Environmental Toxicity: This material is expected to be toxic to aquatic life.

Section 13 - Disposal Considerations

Appropriate method of disposal of substance or preparation:

Handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved waste facility.

Section 14 – Transport Information

DOT

Class 8

PG II

UN 1789

Shipping Name: Hydrochloric Acid Solution

Section 15 - Regulatory Information

Symbol: C, Corrosive

Risk and Safety phrases

R-35, Causes severe burns

S-Phrases: 23-36/37/39-45. Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible)

The following component of this product is regulated as a toxic chemical under section 313 or Title III SARA, and 40 CFR 372: hydrochloric Acid CAS# 7647-01-0

Section 16 - Additional Information

MSDS Creation Date: May 11, 2012

Revision # 1 4/10/13 MH

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