

MATERIAL SAFETY DATA SHEET

MURIATIC ACID 20 DEG.

Product ID: AC002000

Revised: 01-11-2013

Replaces: 12-04-2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: MURIATIC ACID 20 DEG.
Synonyms: Hydrochloric Acid; Hydrogen Chloride
CAS Number: 7647-01-0
Chemical Family: Inorganic Acid
Formula: ~ 31.5% HCl

Hydrite Chemical Co.
300 N. Patrick Blvd.
Brookfield, WI 53008-0948
(262) 792-1450

EMERGENCY RESPONSE NUMBERS:
24 Hour Emergency #: (414) 277-1311
CHEMTREC Emergency #: (800) 424-9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! CORROSIVE. Causes severe burns to eyes, skin, and respiratory tract. Causes digestive tract burns. Reacts with most metals to form explosive/flammable hydrogen gas. DANGER! May react violently with water. Harmful or fatal if swallowed. Harmful or fatal if inhaled.

Physical State: Liquid.
Color: Clear. Colorless to faint yellow.
Odor: Sharp, pungent, irritating odor.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: Eyes. Ingestion. Inhalation. Skin.

Target Organs: Eyes. Skin. Respiratory System.

Eye Contact: CORROSIVE-Causes severe irritation and burns. Liquid or vapor may cause: irritation, burns, tissue destruction, permanent eye damage, blindness.

Skin Contact: CORROSIVE-Causes severe irritation and burns. Contact may cause: redness, swelling, pain, permanent skin damage. Concentrated solutions may cause: ulceration, discoloration. Death may result from burns which extend over large portions of the body. Prolonged or repeated exposure with dilute solutions may cause: irritation, dermatitis (inflammation of the skin).

Skin Absorption: No absorption hazard expected under normal use. May be absorbed through the skin. Less exposure may cause: dermatitis and photo sensitization.

Inhalation: CORROSIVE-Causes severe irritation and burns. Vapors or mists may irritate: nose, throat, respiratory tract. Vapors or mists may cause: coughing, choking, difficulty breathing, burning, headache, rapid heart beat. Prolonged or severe overexposure may cause: burns, ulcerations, pulmonary edema, tissue destruction, circulatory failure, death, erosion of teeth. Effects may be delayed.

Ingestion: CORROSIVE-Causes severe irritation and burns. May cause damage to the: mouth, throat, esophagus, gastrointestinal tract. May cause: severe pain, difficulty swallowing, intense thirst, nausea, vomiting, diarrhea, perforation of the intestinal tract, kidney inflammation, shock, collapse, unconsciousness, death. Aspiration can result in severe lung damage or death.

Medical Conditions Aggravated by Exposure to Product: Eye disorders. Respiratory system disorders. Skin disorders.

Other: Chronic or prolonged exposure may be associated with changes in pulmonary function, laryngitis, glottal edema, chronic bronchitis, dermatitis, erosion of tooth enamel, conjunctivitis and upper respiratory tract irritation.

Cancer Information:

This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

Potential Environmental Effects: See Section 12.

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OSHA Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Hydrogen Chloride	5 ppm Ceiling; 7 mg/m ³ Ceiling

ACGIH Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Hydrogen Chloride	2 ppm Ceiling

Engineering Controls: General room ventilation is required. Local exhaust ventilation, process enclosures or other engineering controls may be needed to maintain airborne levels below recommended exposure limits. Avoid creating dust or mist. Maintain adequate ventilation. Do not use in closed or confined spaces. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

Eye/Face Protection: Wear chemical safety goggles and a full face shield while handling this product. Do not wear contact lenses.

Skin Protection: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Acid-proof. Gauntlet-type. Neoprene. Polyvinyl chloride. Rubber. Butyl rubber. Nitrile. Teflon (R). Responder (R). Viton (R).

Respiratory Protection: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved air-purifying respirator with: Acid gas cartridge and HEPA filter. NIOSH-Approved Supplied Air Respirator (SAR). NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

Other Protective Equipment: Eye-wash station. Safety shower. Rubber apron. Rubber boots. Protective clothing. Full-rubber acid suit.

General Hygiene Conditions: Wash with soap and water before meal times and at the end of each work shift.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.
Color: Clear. Colorless to faint yellow.
Odor: Sharp, pungent, irritating odor.
Boiling Point (deg. F): 183
Freezing Point (deg. F): -51
Melting Point (deg. F): N.D.
Vapor Pressure (mm Hg): 35 @ 25C
Vapor Density (air=1): 1.3
Solubility in Water: Complete
pH: < 1
Specific Gravity: 1.16 @ 60F
% Volatile (wt%): N.D.
Evaporation Rate (nBuAc = 1): N.D.
VOC (wt%): 0
VOC (lbs/gal): 0
Viscosity: N.D.
Flash Point: None.
Flash Point Method: N.A.
Lower Explosion Limit: N.A.
Upper Explosion Limit: N.A.
Autoignition Temperature: N.A.
Fire Point: N.D.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

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15. REGULATORY INFORMATION

TSCA Inventory Status: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA Title III Section 311/312 Category Hazards:

<u>Immediate (Acute)</u> Yes	<u>Delayed (Chronic)</u> Yes	<u>Fire Hazard</u> No	<u>Pressure Release</u> No		<u>Reactive</u> Yes		
<u>Regulated Components:</u>	<u>CAS</u>	<u>CERCLA</u>	<u>SARA</u>	<u>SARA</u>	<u>U.S.</u>	<u>WI</u>	<u>Prop</u>
<u>Component</u>	<u>Number</u>	<u>RQ</u>	<u>EHS</u>	<u>313</u>	<u>HAP</u>	<u>HAP</u>	<u>65</u>
Hydrogen Chloride	7647-01-0	Yes	Yes	Yes	Yes	Yes	No

***Prop 65 - May Contain the Following Trace Components**

Benzene: 0.05 ppm max

Lead: 1 ppm max

Arsenic: 0.5 ppm max

Note: RQ, TPQ, Section 313 reporting requirements are dependent upon individual ingredients. Hydrogen Chloride (gas and aerosol forms only) is on the Extremely Hazardous Substance List. In liquid form, Hydrogen Chloride (Hydrochloric Acid) is not required to be reported as an Extremely Hazardous Substance, but is subject to SARA 311 and 312 reporting requirements. Hydrochloric Acid also appears on the Section 313 list; however, the listing only applies to the gas and aerosol forms of Hydrochloric Acid.

16. ADDITIONAL INFORMATION

Hazard Rating System

Health: 3*

Flammability: 0

Reactivity: 1

* = Chronic Health Hazard

NFPA Rating System

Health: 3

Flammability: 0

Reactivity: 0

Special Hazard: None

MSDS Abbreviations

N.A. = Not Applicable

N.D. = Not Determined

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

C = Ceiling Limit

N.E./Not Estab. = Not Established

MSDS Prepared by: JAK

Reason for Revision: New format.

The data in this Material Safety Data Sheet relates 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 warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.