



HYDRITE CHEMICAL CO.
2655 N. MAYFAIR ROAD
MILWAUKEE, WI 53226

MATERIAL SAFETY DATA SHEET

AC-0020 MURIATIC ACID 20 DEG. PAGE 1

SIMILAR TO O.S.H.A. FORM 20

DIST ID BY: HYDRITE CHEMICAL CO.
2655 N. MAYFAIR ROAD
MILWAUKEE, WI 53226
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(414) 277-1211
MEDS: MV851AC0020
PREPARED BY: LMT/JRS

MANUFACTURED BY: DuPont, Valves, Hooker, Rowell

SECTION I - PRODUCT INFORMATION

TRADE NAME: Muriatic Acid, 20 Deg. Baumé
CHEMICAL NAME & SYNONYMS: Hydrochloric Acid, 20 Deg. Baumé

CHEMICAL FAMILY: Inorganic Acid

FORMULA: 31.45 % HCl

DOT PROPER SHIPPING NAME: MURIATIC ACID

D.O.T. HAZARD CLASS: CORROSIVE MATERIAL

D.O.T. IDENTIFICATION #: UN1789 D.O.T. LABEL: Corrosive

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV (UNITS)
Hydrogen Chloride	31.45 %	5 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (DEG. F): 150 - 230 SPECIFIC GRAVITY: 1.1600
FREEZING POINT (DEG. F): -63.4 PERCENT VOLATILE
VAPOR PRESSURE (MM HG): 35 @ 25 C BY VOLUME: 100 %
VAPOR DENSITY (AIR=1): 1.27 EVAPORATION RATE (aBuAc): > 1

SOLUBILITY IN WATER: 100 %

SECTION III - PHYSICAL DATA

APPEARANCE AND ODOR: Clear, colorless to faint yellow liquid. Sharp, penetrating odor.

SECTION IV - FIRE & EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): None.

FLAMMABLE LIMITS LEL: N.A. UEL: N.A.

EXTINGUISHING MEDIA: For fires in area use appropriate media. For example: Water spray, Dry Chemical, Carbon Dioxide, Alcohol Foam.

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate area of unprotected personnel. Wear protective clothing including a NIOSH-approved self-contained breathing apparatus. Product generates heat upon addition of water, with possible spattering. Run-off from fire control may cause pollution. Neutralize run-off with Lime, Soda Ash, etc., to prevent corrosion of metals and formation of Hydrogen Gas.

UNUSUAL FIRE & EXPLOSION HAZARDS: Product may react with some metals (ex: Aluminum, Zinc, Tin, etc.) to release flammable Hydrogen gas. Heat can cause evolution of gaseous Hydrogen Chloride.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 5 ppm (OSHA 29 CFR 1910.Z)

5 ppm (ACGIH 1984-85)

EFFECTS OF OVEREXPOSURE

EYE CONTACT: Causes severe burns and destruction of tissues. Small quantities can result in permanent damage and loss of vision.
SKIN CONTACT: Corrosive action causes burns and frequently deep ulceration with ultimate scarring.

SECTION V - HEALTH HAZARD DATA

INHALATION: Inhalation of dust or mists can cause damage to the upper respiratory tract and to the lung tissue depending upon the extent of exposure.

INGESTION: Ingestion can cause very serious damage to the mouth, esophagus, stomach, and other tissues with which contact is made, and may be fatal. Ingestion may cause death.

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids open during this flushing with water. Call a physician immediately.

SKIN CONTACT: Flush area with water while removing contaminated clothing and shoes. Follow by washing with soap and water. If irritation persists, get medical attention. Do not apply oils or ointments unless ordered by the physician.

INGESTION: If conscious, drink a quart of water. DO NOT INDUCE VOMITING. Take immediately to a hospital or a physician. If unconscious or in convulsions, take immediately to a hospital or physician. Do not induce vomiting or give anything by mouth to an unconscious victim.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. CALL A PHYSICIAN.

SECTION VI - REACTIVITY DATA

STABILITY: STABLE UNSTABLE
CONDITIONS TO AVOID: Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water.

Muriatic Acid

AC-0020 MURIATIC ACID 20 DEG. PAGE 4

SECTION VI - REACTIVITY DATA

HAZARDOUS DECOMPOSITION PRODUCTS: Heat can cause evolution of gaseous Hydrogen Chloride. May react with certain metals to produce flammable Hydrogen Gas. Hazardous gases are evolved on contact with chemicals such as Cyanides, Sulfides, Carbides, etc.

HAZARDOUS POLYMERIZATION: MAY OCCUR WILL NOT OCCUR

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
CORROSIVE MATERIAL. Evacuate unprotected personnel from area. Maintain adequate ventilation. Use proper Safety Equipment. Contain spill, place into drums for proper disposal. Flush remaining area with water and neutralize with Soda Ash or Lime and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

HAZARDOUS DISPOSAL METHOD: Observe all Local, State, and Federal Regulations. Dispose of at approved Landfill Site or Waste Treatment Facility. If approved, neutralize material and flush to sewer.

SECTION VIII - SPECIAL PROTECTION INFORMATION

CONSULT SAFETY EQUIPMENT DISTRIBUTOR

RESPIRATORY PROTECTION: If TLV is exceeded wear: NIOSH-Approved self-contained breathing apparatus.

VENTILATION: Maintain adequate ventilation. Keep levels below recommended TLV. Avoid mist formation.

PROTECTIVE GLOVES: Acid-proof. Gauntlet-type. Rubber (Latex).

EYE PROTECTION: Chemical Safety Goggles. Face shield. Do not wear contact lenses.

AC-0020 MURIATIC ACID 20 DEG. PAGE 5

SECTION VIII - SPECIAL PROTECTION INFORMATION

OTHER PROTECTIVE EQUIPMENT: Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing. Full-rubber acid suit.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

CORROSIVE MATERIAL. Store in cool, well-ventilated area away from all sources of ignition and out of direct sunlight. Keep containers tightly closed. Relieve pressure in drums weekly. Highly corrosive to most metals with evolution of Hydrogen Gas. Store away from incompatible materials.

OTHER PRECAUTIONS: Avoid contact with skin and eyes. Do not swallow. Use with adequate ventilation. Avoid prolonged or repeated breathing of vapors. Wash thoroughly after handling. Avoid dust or mist formation.

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The data in this Material Safety 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 Hydrite Chemical Co. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.