



AMREX CHEMICAL CO., INC.

117 E. Frederick St.
P. O. Box 642
Binghamton, NY 13902

Vista Chemical Company
P. O. Box 19029
Houston, Texas 77224-9029

VISTA

MURIATIC ACID 20° BAUMÉ

MSDS CODE: MA20BALT
REVISION: 01/94

REVISION DATE: 12/05/94
PRINT DATE: 01/25/96

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: MURIATIC ACID 20° BAUMÉ
SYNONYMS: Hydrochloric Acid

MANUFACTURER: Vista Chemical Company
ADDRESS: 900 Threadneedle
Houston, TX 77079

TELEPHONE NUMBERS: CHEMTREC - Transportation Emergency (24-hr) (800) 424-9300
Other Emergencies (24-hrs) (318) 494-5142
MSDS and Product Information (8:00am-4:30pm CST) (713) 588-3491
Health and Safety Information (7:30am-5:00pm CST) (410) 354-5975

2. COMPOSITION / INFORMATION ON INGREDIENTS

| <u>Components</u> | <u>CAS Number</u> | <u>Weight%</u> |
|-------------------|-------------------|----------------|
| Hydrochloric Acid | 7647-01-0 | 31.5 |
| Water | 7732-18-5 | 68.5 |

See Section 8 for Exposure Guidelines and Section 15 for OSHA Classification

3. HAZARDS IDENTIFICATION

Emergency Overview

Clear, nearly colorless liquid. Strong, irritating odor.

HEALTH HAZARD: DANGER! CAUSES EYE, SKIN, AND RESPIRATORY TRACT BURNS! Liquid contact to eyes and skin will cause burning, strong irritation, and tissue damage. May cause blindness or be fatal with skin contact or ingestion. Inhalation of vapor may cause coughing, choking and result in damage to mucous membranes and other pulmonary effects.



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Potential Health Effects

EYES:

Corrosive. Liquid contact will cause burning, strong irritation and tissue damage. Irreversible damage may occur. May cause blindness. Chronic overexposure may cause ulceration of mucous membranes.

SKIN:

Corrosive. Liquid contact will cause burning, strong irritation and tissue damage. Irreversible damage may occur. May be fatal. Chronic overexposure may cause ulceration of skin.

INHALATION:

Strong respiratory tract irritant. Inhalation may cause coughing and choking, and result in damage to mucous membranes and other pulmonary effects. People with preexisting respiratory conditions, such as asthma, may be especially sensitive to these effects. Exposure may be fatal depending on the magnitude and duration of exposure. Excess cancer risks have been reported for workers exposed to hydrochloric acid. However, the International Agency for Research on Cancer has reviewed these and additional studies and found that they provide inadequate evidence for carcinogenicity in man or animals.

INGESTION:

Corrosive to tissue on contact. May be fatal. Chronic overexposure may damage teeth and cause ulceration of mucous membranes.

(See Section 11 for Toxicological Information)

4. FIRST AID MEASURES

EYES:

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately. Call a physician.

SKIN:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

INHALATION:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately. (Medical Toxicology, 1988).

INGESTION:

DO NOT INDUCE VOMITING. Give victim a glass of water. Call a physician immediately.



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5. FIRE FIGHTING MEASURES

Flammable Properties

FLASH POINT / METHOD:
Not applicable.

AUTOIGNITION TEMPERATURE:
Not applicable.

FLAMMABLE LIMITS IN AIR % BY VOLUME:
LOWER: Not applicable.
UPPER: Not applicable.

FIRE AND EXPLOSION HAZARD:

None expected; however, explosive gases can be produced by the reaction of hydrochloric acid with metals.

EXTINGUISHING MEDIA:

Water (flood with water), dry chemical, CO₂, or "alcohol" foam.

FIRE FIGHTING INSTRUCTIONS:

Hydrochloric acid solutions do not burn. Use water spray to cool fire-exposed containers of HCl to prevent ruptures. Use self-contained breathing apparatus (SCBA) and structural firefighters protective clothing if fighting fire.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK:

Absorb spill with inert material, then place in a chemical waste container. Neutralize with soda ash or lime. For large spills, dike for later disposal. Dispose of only in accordance with local, state, and federal regulations.

CERCLA HAZARDOUS SUBSTANCE:

Component

CERCLA RQ

Maximum Wt. %

Hydrochloric Acid

5,000 lbs.

32



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7. HANDLING AND STORAGE

ELECTROSTATIC ACCUMMULATION HAZARD:
None

USUAL SHIPPING CONTAINERS:
DOT approved tank cars, tank trucks and drums as specified in 49 CFR.

STORAGE / TRANSPORT TEMPERATURE:
Ambient.

STORAGE / TRANSPORT PRESSURE:
Ambient

LOAD / UNLOAD TEMPERATURE:
Ambient.

STORAGE AND HANDLING MATERIALS:
Polyester-coated steel, rubber (Hypalon), and teflon are suitable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Adequate ventilation to reduce levels of air contaminants below that which may cause personnel injury or illness. (See exposure guidelines of this section.)

Personal Protective Equipment

EYES:
Chemical goggles or safety shield. Where splashing is possible, wear full-face shield.

SKIN:
Full protective acid-resistant clothing, boots, and gloves to prevent any contact with this material.

RESPIRATORY PROTECTION:
NIOSH approved acid-gas air purifying canister, or air-supplied equipment.



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Exposure Guidelines:

Component

OSHA PEL

ACGIH TLV

Hydrochloric Acid

CEILING: 5 ppm TWA

CEILING: 5 ppm TWA

PEL = Permissible Exposure Limits
TLV = Threshold Limit Value

TWA = Time Weighted Average (8 hr.)
STEL = Short Term Exposure Limit (15 min.)

Carcinogenicity

No carcinogenic ingredients.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

Clear, nearly colorless liquid.

VISCOSITY:

1.484 - 1.551 cSt @ 68°F / 20°C

ODOR:

Strong, irritating odor.

PHYSICAL STATE:

Liquid.

VAPOR PRESSURE (mm Hg.):

33 @ 77°F/25°C

BOILING POINT:

Approximately 185°F/85°C

VAPOR DENSITY (Air = 1):

1 - 2

MELTING POINT:

Approximately -47°F (-44°C)

SOLUBILITY IN WATER:

Miscible.

SPECIFIC GRAVITY (H₂O = 1):

1.16 @ 70°F / 21°C

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:

Contact with metals, metal oxides, hydroxides, amines, carbonates, and other alkaline metals.

INCOMPATIBILITY WITH OTHER MATERIALS:

Highly corrosive to many materials.

HAZARDOUS DECOMPOSITION PRODUCTS:

Hydrogen gas formed on contact with most metals. Hydrochloric acid vapors emitted when heated.
Chlorine gas may be formed by electrolysis or oxidation.



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HAZARDOUS POLYMERIZATION:

None.

11. TOXICOLOGICAL INFORMATION

EYES:

CORROSIVE - May cause permanent damage.

SKIN:

CORROSIVE - May cause permanent damage.

Acute Dermal LD₅₀ (Rabbits): >5,000 mg/kg.

INHALATION:

LC₅₀ (Rats): 4,700 ppm (30 minute exposure)

LC₅₀ (Mice): 2,600 ppm (30 minute exposure)

Exposure of baboons of up to 10,000 ppm hydrogen chloride for 15 minutes did not exhibit any lasting pulmonary effects at three days or three months later. 2,600 ppm (30 minute exposure)

INGESTION:

Acute Oral LD₅₀ (Rabbits): 900 mg/kg.

Acute Oral LD₅₀ (Rat): 700 mg/kg.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

Not available. (pH dependent.)

CHEMICAL FATE INFORMATION:

Not applicable. Material is already in a completely mineralized state.

13. DISPOSAL CONSIDERATIONS

SPECIAL INSTRUCTIONS:

Absorb spill with inert material, then place in a chemical waste container. Neutralize with soda ash or lime. For large spills, dike for later disposal. Dispose of only in accordance with local, state, and federal regulations.



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WASTE CLASSIFICATION:

The product has the RCRA characteristic of corrosivity and if discarded in its purchased form would have the EPA Hazardous Waste Number of D002 (pH <2). Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations and mixtures may change the classification to non-hazardous or hazardous for reasons other than, or in addition to, corrosivity.

EMPTY CONTAINERS:

Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

(See Section 6 for CERCLA Reporting Requirements)

14. TRANSPORT INFORMATION

DOT DESCRIPTION:

This product is regulated as a hazardous material as defined by the Department of Transportation.

PROPER SHIPPING NAME: Hydrochloric Acid, Solution
HAZARD CLASS: 8
IDENTIFICATION NUMBER: UN 1789
PACKING GROUP: II
ADDITIONAL INFORMATION: RQ (Hydrochloric Acid) = 5,000 lbs.

ICAO / IATA DESCRIPTION:

This product is regulated as a dangerous good as defined by IATA for air transportation.

PROPER SHIPPING NAME: Hydrochloric Acid, Solution
HAZARD CLASS: 8
UN NUMBER: UN 1789
PACKING GROUP: II
ADDITIONAL INFORMATION: RQ (Hydrochloric Acid) = 5,000 lbs.

IMO DESCRIPTION (IMDG CODE):

This product is regulated as a dangerous good as defined by the IMDG Code for

PROPER SHIPPING NAME: Hydrochloric Acid, Solution
HAZARD CLASS: Class 8
IDENTIFICATION NUMBER: UN 1789
PACKING GROUP: II
ADDITIONAL INFORMATION: RQ (Hydrochloric Acid) = 5,000

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15. REGULATORY INFORMATION

U.S. Federal Regulations

OSHA HAZARD COMMUNICATION STANDARD CLASSIFICATION:
Corrosive as defined by the OSHA Hazardous Communication Standard.

TSCA INVENTORY LISTING:

Component

CAS Number

Hydrochloric Acid

7647-01-0

SARA 302 STATUS:

Component

CAS Number

Maximum Wt. %

Contains no chemicals subject to SARA 302 reporting.

SARA 311/312 CLASSIFICATION:

SARA 311/312 "Immediate (acute) health hazard".

SARA 313 CHEMICALS:

Component

CAS Number

Maximum Wt. %

Hydrochloric Acid

7647-01-0

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(See Section 6 for CERCLA Reporting Requirements.)

International Regulations

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) CLASSIFICATION:
Class E: Corrosive material.

CANADIAN DOMESTIC SUBSTANCE LIST (DSL) INVENTORY LISTING:

Chemical Name

CAS Number

Hydrochloric Acid

7647-01-0



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EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS) LISTING:

Chemical Name

EINECS Number

Hydrochloric Acid

2315957

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) INVENTORY LISTING:

Chemical Name

SECTION STRUCTURE #

Hydrogen Chloride

1-324

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) LISTING:

Chemical Name

CAS Number

Hydrochloric Acid

7647-01-0

State Regulations

CALIFORNIA SAFE DRINKING WATER ACT (PROP 65) LISTING:

Component

CAS Number

No ingredients listed in this section

16. OTHER INFORMATION

Hazard Ratings

NFPA

HMIS

HEALTH:
FLAMMABILITY:
REACTIVITY:

3
0
0

3
0
0

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PREPARED BY: Vista Safety, Health and Environmental Department
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