

## MATERIAL SAFETY DATA SHEET

Vista Chemical Company  
P.O. Box 19029  
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### 1. PRODUCT IDENTIFICATION

MANUFACTURING SITE	Baltimore Chemical Plant		
ADDRESS	3441 Fairfield Road, Baltimore, MD 21226		
TRADE NAME	MURIATIC ACID (18°, 20°, and 22° Baume')		
SYNONYMS	hydrochloric acid		
CAS NUMBER(S)	7647-01-0 hydrochloric acid		
TELEPHONE NO.	(713) 588-3491	EMERGENCY TELEPHONE NO.	(318) 494-5142

### 2. COMPONENTS AND HAZARD CLASSIFICATION

HAZARDOUS INGREDIENTS: hydrochloric acid

18° Baume'	= 27.9%
20° Baume'	= 31.5%
22° Baume'	= 35.2%

- Corrosive as defined by the OSHA Hazard Communication Standard.
- No SARA 302 chemicals above the regulatory threshold.
- SARA 311/312 "Immediate (acute) health hazard".
- Contains a maximum 36.5% hydrochloric acid (CAS# 7647-01-0) which is a chemical subject to SARA 313 reporting.

### 3. PHYSICAL DATA

BOILING POINT (°F)	≈205/185/140°F	SPECIFIC GRAVITY (H <sub>2</sub> O= 1)	1.142/1.16/1.179
VAPOR PRESSURE (mm Hg.)	16/33/114 @ 77°F	MELTING POINT	-76/-47/-32°F
SOLUBILITY IN WATER	Miscible	VAPOR DENSITY	≈1.25 for 20° Baume'
APPEARANCE AND ODOR	Clear, nearly colorless liquid. Strong irritating odor.		

### 4. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	Not applicable	AUTOIGNITION TEMPERATURE	Not applicable
FLAMMABLE LIMITS IN AIR. % BY VOL.		LOWER	Not applicable
		UPPER	Not applicable
EXTINGUISHING MEDIA	Water (flood with water), dry chemical, CO <sub>2</sub> , or "alcohol" foam.		
SPECIAL FIRE FIGHTING PROCEDURES	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.		
UNUSUAL FIRE AND EXPLOSION HAZARD	None expected; however, explosive gases can be produced by the reaction of hydrochloric acid with metals.		

## 5. HEALTH HAZARD INFORMATION

### FIRST AID

- 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.
- INGESTION:** Do not induce vomiting. Give victim a glass of water. Call a physician immediately.

### NATURE OF HAZARD

- 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 upper respiratory tract irritant. Inhalation of vapor may cause coughing and choking, and result in damage to mucous membranes and other pulmonary effects. May be fatal. Chronic overexposure may damage teeth.
- INGESTION:** Corrosive to tissue on contact. May be fatal. Chronic overexposure may damage teeth and cause ulceration of mucous membranes.

### EXPOSURE LIMITS

Hydrogen chloride: OSHA CEILING = 5 ppm TWA  
ACGIH CEILING = 5 ppm TWA

### TOXICITY DATA

- EYE:** CORROSIVE - may cause permanent damage.
- SKIN:** CORROSIVE - may cause permanent damage.  
Acute Dermal Toxicity (rabbit): LD<sub>50</sub> >5000 mg/kg.
- INHALATION:** LC<sub>50</sub> (rat): 3100 ppm (1 hour exposure). Subchronic exposure to 30 - 100 ppm produced slight irritation in monkeys and small rodents.
- INGESTION:** Acute Oral Toxicity (rabbit): LD<sub>50</sub> = 900 mg/kg (20° Baume')  
Acute Oral Toxicity (rat): LD<sub>50</sub> = 700 mg/kg (20° Baume')

**SPECIAL PRECAUTIONS** CAUSES EYE, SKIN, AND RESPIRATORY TRACT BURNS

## 6. REACTIVITY DATA

### CONDITIONS CONTRIBUTING TO INSTABILITY:

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

### INCOMPATIBILITY:

Highly corrosive to many materials.

### HAZARDOUS DECOMPOSITION PRODUCTS:

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

### CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:

None

## 7. SPILL OR LEAK PROCEDURES

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.

REPORTING: Contains 27-36.5% hydrochloric acid. CERCLA RQ = 5000 lbs. for hydrochloric acid.

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.

## 8. SPECIAL PROTECTION INFORMATION

### VENTILATION RECOMMENDATIONS

Adequate ventilation to reduce levels of air contaminant below that which may cause personnel injury or illness. Exposure limits listed under Section 5. HEALTH HAZARD INFORMATION.

### SPECIFIC 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.

## 9. SHIPPING, TRANSFER AND STORAGE

### SHIPPING INFORMATION

	PROPER SHIPPING NAME	HAZARD CLASS	IDENTIFICATION NUMBER
DOT	Hydrochloric acid, solution	8	UN 1789
IATA	Hydrochloric acid, solution	8	UN 1789
IMDG CODE	Hydrochloric acid, solution	8	UN 1789
PACKING GROUP:	II		
ADDITIONAL INFORMATION:	RQ (hydrochloric acid) RQ = 5,000 lbs.		

### TRANSPORTATION AND STORAGE

**ELECTROSTATIC ACCUMULATION HAZARD:** None  
**STORAGE/TRANSPORT PRESSURE:** Ambient  
**STORAGE/UNLOADING TEMPERATURE:** Ambient

### HANDLING AND STORAGE MATERIALS AND COATINGS

**SUITABLE:** Polyester-coated steel, rubber (Hypalon), teflon.  
**CORROSION:** Severe

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5001WP/BALT.002



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SARA Notification

The following product contains a toxic chemical or chemicals (as listed below) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40CFR Part 372:

<u>Toxic Material or Component</u>	<u>CAS Number</u>	<u>Weight</u>
Hydrochloric Acid	7647-01-1	31.5%

SARA 311 Hazard Categories:

Immediate (Acute) Health: YES  
Delayed (Chronic) Health: NO  
Fire Hazard: NO  
Reactive Hazard: NO  
Sudden Release of Pressure: NO

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