



Ready Resources, Inc. / Ready Clean
108 S. Robinson Drive (Hwy. 77 South)
Waco, Tx. 76706
(254) 662-0855 Toll Free (877) 662-5450 Fax (254) 662-5450
TX. VENDOR #28993

MATERIAL SAFETY DATA SHEET

MSDS NUMBER : M7696
MSDS DATE : 01/01/2004
PRODUCT NAME : HYDROCHLORIC ACID 20 DEGREE (MURIATIC ACID)

24 HOUR EMERGENCY PHONE: 800-424-9300

I. PRODUCT IDENTIFICATION

HMIS HAZARD RATINGS

HEALTH HAZARD 3 FIRE HAZARD 0 REACTIVITY 2
Based on the National Paint & Coatings Association HMIS rating system.

SARA/TITLE III HAZARD CATEGORIES (See Section X)

Immediate (ACUTE) Health: YES Reactive Hazard: YES
Delayed (CHRONIC) Health: NO Sudden Release of Pressure: NO
Fire Hazard: NO

SUPPLIER'S : Ready Resources, Inc. / Ready Clean
NAME & : 108 S. Robinson Dr. (Hwy 77 South)
ADDRESS : Waco, TX 76706 TELEPHONE: (254) 662-0855
CHEMICAL NAME: Hydrochloric Acid CAS NUMBER: 7647-01-0 (254) 717-1735
SYNONYMS/COMMON NAMES: HCL; Aqueous Hydrogen Chloride, Muriatic Acid
CHEMICAL FORMULA: HCL
DOT PROPER SHIPPING NAME: Hydrochloric Acid, Solution
DOT HAZARD CLASS: 8
DOT I.D. NUMBER: UN1789
DOT PACKING GROUP: II
DOT HAZARDOUS SUBSTANCE: RQ 5000# (Hydrochloric Acid)
DOT MARINE POLLUTANT: NA
ADDITIONAL DESCRIPTION REQUIREMENT: NA

II. HEALTH HAZARD INFORMATION

EMERGENCY AND FIRST AID PROCEDURES

EYES:

OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION.
IMMEDIATELY flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire eye surface. Washing eyes within seconds is essential to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY.

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II. HEALTH HAZARD INFORMATION (Continued)

SKIN:

IMMEDIATELY wash contaminated areas with plenty of soap and water for at least 15 minutes. A soothing ointment may be applied to irritated skin after thorough cleansing. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

INHALATION:

Remove to fresh air; if breathing is difficult, have trained person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. **GET MEDICAL ATTENTION.**

INGESTION:

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. If swallowed, **DO NOT INDUCE VOMITING.** Give large quantities of water. If available, give several glasses of milk. Keep airway clear. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

ROUTES OF EXPOSURE

INHALATION:

Inhalation of gas, mist, fog, or spray will cause severe irritation of the upper respiratory tract, resulting in coughing, burning of the throat, and a choking sensation. If inhaled deeply, edema of the lungs may occur.

SKIN:

Irritating and corrosive to skin and can cause severe burns if not promptly washed off. Repeated contact of the skin may lead to the development of dermatitis.

EYE CONTACT:

This product rapidly causes severe irritation of the eyes and eyelids. If the acid is not quickly removed by thorough irrigation with water, there may be prolonged or permanent visual impairment or total loss of sight. Hydrogen chloride gas escaping from the aqueous solution is immediately irritating to the eyes.

INGESTION:

This product causes severe burns of mucous membranes of the mouth, esophagus, and stomach if swallowed.

EFFECTS OF OVEREXPOSURE

ACUTE:

Strongly irritating and corrosive to the eyes, skin, mouth, and digestive system. Vapors are irritating to the respiratory tract; excessive exposure may cause more severe symptoms including pulmonary edema.

The local dermal effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis. Similarly, inhalation of spray, mist, or vapor may result in varying degrees of irritation or damage to the respiratory illness. Prolonged or repeated exposure to concentrations in excess of the TLV may cause discoloration and/or erosion of the teeth.

CHRONIC:

No known chronic health effects.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Any acute or chronic respiratory condition.

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II. HEALTH HAZARD INFORMATION (Continued)

TOXICOLOGY DATA:

Hydrochloric Acid

Acute Oral LD50	(rabbit)	900 mg/kg
Acute Inhalation LC50	(rat, 1hr)	3124 ppm
Corrosivity	(rabbit)	0.01% - 15% Concentration, Non-Corrosive
Corrosivity	(rabbit)	>15% Concentration Corrosive

III. IMPORTANT COMPONENTS

CAS NUMBER/NAME

7732185 Water

EXPOSURE LIMITS

PEL: Not Established
TLV: Not Established

PERCENTAGE

VOL 78.30-82
WT 64-69

COMMON NAMES:

Listed On (List Legend Below):

19 23

7647010 Hydrochloric Acid

EXPOSURE LIMITS

PEL: 5 ppm; 7 mg/m₃, Ceiling
TLV: 5 ppm; 7.5 mg/m₃, Ceiling

PERCENTAGE

VOL 18-21.70
WT 31-36

COMMON NAMES:

HYDROGEN CHLORIDE

Listed On (List Legend Below):

01 02 13 18 21

All components of this product that are required to be on the TSCA Inventory are listed on the inventory.

Not listed as carcinogen - ARC, NT, OSHA

LIST LEGEND

- | | |
|-----------------------------------|------------------------------------|
| 1. SARA EXTRA HZ SUB, SECTION 302 | 2. SARA TOXIC CHEM., SECTION 313 |
| 13. PA ENVIRONMENTAL HZ SUBSTANCE | 18. NY HAZARDOUS SUBSTANCES |
| 19. PA REQUIREMENT- 3% OR GREATER | 21. NJ SPECIAL HEALTH HZ SUBSTANCE |
| 23. NJ REQUIREMENT- 1% OR GREATER | |

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II. FIRE AND EXPLOSION DATA

FLASH POINT: NA

AUTOIGNITION TEMPERATURE: NA

FLAMMABLE LIMITS IN AIR, % BY VOLUME- UPPER: Nonflammable

- LOWER: Nonflammable

EXTINGUISHING MEDIA:

Hydrogen chloride is non-combustible. Carbon dioxide, dry chemical and foam may all be used in areas where hydrogen chloride is stored.

SPECIAL FIRE FIGHTING PROCEDURES:

Positive pressure, self-contained respiratory protection should be provided for fire fighters in buildings or confined areas where this product is stored.

UNUSUAL FIRE AND EXPLOSION HAZARD:

This product is nonflammable and nonexplosive under normal conditions of use. At high temperatures, this product can generate toxic and irritating gases. If storage containers are exposed to excessive heat, over-pressurization and rupture of the containers can result. The use of water on this product should be discouraged. Addition of water may cause violent reaction.

This product attacks most metals with evolution of explosive hydrogen gas.

V. SPECIAL PROTECTION

VENTILATION REQUIREMENTS:

Work in well ventilated areas. Use good engineering controls. Use local exhaust ventilation where mist, spray, gas, vapors, or fumes may be generated.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY:

Use a NIOSH/MSHA approved respirator following manufacturer's recommendation where gas, vapor, fumes, spray, or mist may be generated.

EYE:

Wear chemical safety goggles plus full face shield to protect against splashing when appropriate (ANSI Z87.1).

GLOVES:

Wear chemical resistant gloves such as natural rubber, neoprene, nitrile or PVC.

OTHER CLOTHING AND EQUIPMENT:

Impervious and chemical resistant clothing and rubber shoes or boots should be used where any possibility of skin contact exists. Emergency shower and eyewash facility should be in close proximity (ANSI Z358.1).

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II. PHYSICAL DATA

	<u>20 Be</u>	<u>22 Be</u>
BOILING POINT @ 760 mm Hg:	176 F	140 F
	80 F	60 F
FREEZING POINT:	-49.3 F	-29.2 F
	-45 C	-34 C
SPECIFIC GRAVITY (H ₂ O=1):	1.16	1.18
DENSITY:	1.16 gm/cc,	1.18 gm/cc,
VAPOR PRESSURE @ 20 C:	9.67 lb/gal	9.83 lb/gal 80 mm
SOLUBILITY IN H ₂ O % BY WT:	Infinite	
VAPOR DENSITY (Air=1):	1.3 @ 201C	
APPEARANCE AND ODOR:	Clear to slightly yellow liquid with a sharp irritating odor.	
pH:	0.2 % solution has a pH of '2.	

All data varies with concentration.

VII. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY:

Under normal conditions of use, this product is stable. Releases hydrogen chloride gas when heated.

INCOMPATIBILITY:

Avoid contacting this product with alkalines, alkali metals or other active metals and certain of their compounds. Do not add water directly to the product. The product may be added to water with mixing and dilution. Mixing with strong oxidizers can yield chlorine gas.

HAZARDOUS DECOMPOSITION PRODUCTS:

At high temperatures, this product generates toxic and irritating gases. Reacts with metals with the evolution of hydrogen which when mixed in air may result in fire or explosion if ignited. Chlorine gas may be released by mixing with strong oxidizers.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:

Material is not known to polymerize.

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VIII. HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS:

When handling, wear chemical safety goggles and face shield, gloves and protective clothing.

Avoid breathing vapor, use with adequate ventilation - if exposure is likely, wear appropriate respiratory protection.

Wash thoroughly after handling.

Keep heat, sparks, open flames, pilot lights, and lighted cigarettes away from area of use as toxic, corrosive, and explosive gases may be formed.

Keep container tightly closed when not in use.

Store in cool, ventilated area away from flammable substances and oxidizing materials, particularly nitric acid or chlorates.

Open container carefully to avoid spurting.

DO NOT ADD WATER DIRECTLY TO PRODUCT, and do not mix with alkalis such as sodium hydroxide (caustic soda) or alkali metals, to avoid possible violent reaction. The product may be added to water with mixing and dilution.

Do not store in unlined containers. Leaking containers should be removed to outdoors or to an isolated and well ventilated area and contents transferred to a suitable container or disposed in a safe manner.

Dike and vent storage tanks.

X. ENVIRONMENTAL PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Proceed with caution and restrict access to area. Keep unprotected personnel up wind of spill area. Get protective clothing and equipment. Dike and contain spill and prevent from entering sewers and waterways. Contain spill and pump into marked containers for reclamation or disposal. For small spills or residue after pumping, neutralize with soda ash or dilute caustic soda solution or absorb with compatible substances such as sand or earth. Clean up material should be removed and placed in approved containers. Spills or releases should be reported; if required, to the appropriate local, state, and federal agencies.

WASTE DISPOSAL METHOD:

The materials resulting from clean-up operations may be hazardous wastes and, therefore, subject to specific regulations. Package, store, transport, and dispose of all clean-up materials and any contaminated equipment in accordance with all applicable federal, state, and local health and environmental regulations. Shipments of waste materials may be subject to manifesting requirements per applicable regulations. Appropriate disposal will depend on the nature of each waste material and should be performed by competent and properly permitted contractors. Ensure that all responsible federal, state, and local agencies receive proper notification of spill and disposal methods.

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X. ADDITIONAL INFORMATION

Sec 311 of the Clean Water Act lists Muriatic Acid as a hazardous substance which, if discharged into or upon water, may require immediate response to mitigate danger to public health. Spills of Muriatic Acid of 5000 or more pounds must be reported to the National Response Center, 1-800-424-8802.

Contained on a composite list as required under Sec 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (Superfund) which includes substances designated pursuant to Sec. 3001 of the Solid Waste Disposal Act (RCRA), Sec. 307 of the Clean Water Act, Sec. 112 of the Clean Air Act, Sec. 7 of TSCA and Sec. 102 of CERCLA.

OSHA Standard 29CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.

To aid our customers in complying with regulatory requirements, SARA Title III hazard categories for this product are indicated in Section I. If the word "YES" appears next to any category, this product may be reportable by you under the requirements of 40 CFR Part 370. Please consult those regulations for details.

This product contains a toxic chemical or chemicals subject to the reporting requirements of SECTION 313 of TITLE III of the SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 and 40 CFR PART 372. (See Section III, List Legend 02).

XI. PREPARATION INFORMATION

For additional Non-Emergency health, safety, or environmental information, telephone(254) 662-0855 or write to:

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108 S. Robinson Drive (Hwy 77 South)
Waco, TX 76706
(254) 662-0855 (254) 717-1735

FOR EMERGENCIES:

24 HOUR EMERGENCY PHONE (800) 424-9300

To request an MSDS:

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WARNING LABEL INFORMATION

SIGNAL WORD: DANGER

STATEMENT OF HAZARDS:

CORROSIVE

CAUSES SEVERE BURNS TO EYES, SKIN, AND DIGESTIVE TRACT

SEVERELY IRRITATING TO RESPIRATORY TRACT- EXCESSIVE EXPOSURE MAY

CAUSE LUNG DAMAGE.

MAY CAUSE DISCOLORATION AND EROSION OF TEETH.

PRECAUTIONARY STATEMENTS:

Keep container closed except when transferring material.

Do not breathe vapor.

Insure adequate ventilation or use an approved respirator.

Do not get in eyes, on skin, on clothing.

Use goggles, face shield, and rubber shoes. Wear protective clothing and gloves made of vinyl, neoprene, or rubber.

Wash thoroughly after handling.

Material in contact with metals may liberate toxic and flammable gases.

In presence of moisture, material in contact with metals may release flammable hydrogen gas.

Do not allow entry to sewers or waterways.

FIRST AID:

FOR EYES:

essential OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION. IMMEDIATELY flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire eye surface. Washing eyes within seconds is to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY.

FOR SKIN:

cannot IMMEDIATELY wash contaminated areas with plenty of soap and water for at least 15 minutes. A soothing ointment may be applied to irritated skin after thorough cleansing. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which be decontaminated. SEEK MEDICAL ATTENTION IMMEDIATELY.

IF INHALED:

Remove to fresh air. If breathing is difficult, trained person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. GET MEDICAL ATTENTION.

IF SWALLOWED:

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. If available, give several glasses of milk. Keep airway clear. SEEK MEDICAL ATTENTION IMMEDIATELY.

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WARNING LABEL INFORMATION (Continued)

SPILL OR LEAK:

Get protective equipment. Contain spill and pump into marked container for reclamation or disposal. Avoid discharges to sewers and streams. Spills of 5000 pounds or more must be reported to the National Response Center, (800) 424-8802.

FIRE:

Material will not burn. Use extinguishing medium as appropriate for surrounding fire. Use self-contained breathing apparatus and full protective equipment fire will liberate toxic gases. ADDITION OF WATER MAY CAUSE VIOLENT REACTION.

HANDLING AND STORAGE:

Store in a cool, dry, well-ventilated area away from metals and strong alkalies, flammable substances and oxidizing materials.

Dike and vent storage tanks.

Do not add water directly to product, do not mix with alkalies or alkali metals.

Do not store in unlined containers.

DISPOSAL:

Submit to an approved chemical disposal service for disposal in accordance with government regulations.

INFORMATION REQUIRED BY FEDERAL, STATE OR LOCAL REGULATIONS:

This product contains:

<u>CAS#</u>	<u>NAME</u>
7732185	Water
7647010	Hydrochloric Acid

HMIS RATING SYSTEM: HEALTH 3, FLAMMABILITY 0, REACTIVITY 2

FOR INDUSTRIAL USE ONLY LABEL 083M7696

For additional information see Material Safety Data Sheet (MSDS) for this product.