Leslie's Swimming Pool Supplies
Material Safety Data Sheet

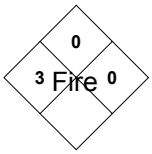
Date Prepared: October 28, 1999 MSDS No.: 14-013GPS
Material Name: **Muriatic Acid** Telephone No. (602) 366-3999

24 HOUR EMERGENCY PHONE: CHEMTREC 800-424-9300

SECTION I - GENERAL INFORMATION

Manufacturer's Name:	Various
Distributor's Address:	3925 E. Broadway Rd., #100 Phoenix, AZ 85040
Distributor's Phone (Information):	602-366-3999
Manufacturer's Phone (Emergency):	None - Call Chemtrec 800-424-9300
Trade/Product Name:	**Muriatic Acid**
Synonyms:	Liquid Pool Acid,
Chemical Name:	Hydrochloric Acid
Chemical Formula:	HCl
CAS No.:	7647-01-0
DOT Proper Shipping Name:	Hydrochloric acid, solution
DOT Hazard Class:	8
Packaging Group:	II
DOT I.D. Number:	UN1789
SARA/Title III Hazard Categories:	
Immediate (Acute) Health: Yes	**Reactive Hazard:** Yes
Delayed (Chronic) Health: No	**Sudden Release of Pressure:** No
Fire Hazard: Yes	

NFPA Hazard Ratings:



Health Reactivity

Special
NFPA = National Fire Protection Association

FIRE: Materials that will not burn.
HEALTH: Materials extremely hazardous to health but areas may be entered with extreme care. Full protective clothing, including self-contained breathing apparatus, coat, pants, gloves, boots, and bands around legs, arms, and waist should be provided. No skin surface should be exposed.
REACTIVITY: Materials that (in themselves) are normally stable even under fire exposure conditions and that are not reactive with water. Normal fire fighting procedures may be used.
SPECIAL:

SECTION II - IMPORTANT COMPONENTS

Regulated components:

CAS NO.	INGREDIENT	WT.%	EXPOSURE LIMITS
7647-01-0	Hydrochloric acid	25-36	OSHA TLV: None established ACGIH TLV: 5 ppm

SECTION III - HEALTH HAZARD INFORMATION

Summary of risks: Hydrogen chloride, both as a gas and in solution as hydrochloric acid, is a corrosive substance and can cause severe and painful burns on contact with any part of the body or if taken internally. The mucous membranes of the eyes and the upper respiratory tract are especially susceptible to the irritating effects of high atmospheric concentrations of hydrogen chloride. The gas or vapor is so penetrating and pungent that when high concentrations do occur, those exposed must immediately leave the contaminated area.

SKIN: Immediately flush the affected areas with water. Remove contaminated clothing under the shower. Continue washing with water - do not attempt to neutralize with chemical agents.

Severe or extensive burns may be caused by hydrochloric acid producing shock symptoms (rapid pulse, sweating and collapse). In these cases keep the patient on his back and comfortably warm. Obtain medical attention as soon as possible. Do not apply oils or ointments unless directed by a physician.

INHALATION: Remove from contaminated atmosphere. If breathing has ceased, start mouth-to-mouth resuscitation. Oxygen if available should only be administered by an experienced person when authorized by a physician. Keep patient warm and comfortable.

INGESTION: Obtain medical attention as soon as possible. If the patient has swallowed hydrochloric acid and is conscious, give large amounts of lime water or milk of magnesia. Plain water should be given if neither of these are available. Do not give sodium bicarb or make any attempt to induce vomiting.

In the event of injury resulting from overexposure, remove the patient from source of contamination and apply the recommended first aid procedures. Respiration is of prime importance. If breathing has ceased, mouth-to-mouth artificial respiration should be performed. Never give anything by mouth to an unconscious person, medical attention should be obtained as soon as possible after injury, even if the injury appears slight. The physician should be given a detailed account of the incident.

ROUTES OF EXPOSURE

INHALATION: Inhalation of excessive concentrations of hydrogen chloride vapors immediately produces severe irritation of the upper respiratory tract, resulting in coughing, burning of the throat, and choking sensation. Reactions encountered in man have usually been limited to inflammation and occasional ulceration of the nose, throat and larynx. If inhaled deeply, edema of the lungs may occur.

SKIN: Concentrated solutions are destructive to clothing and, on contact with skin, causes severe burns unless promptly washed off. Repeated skin contact with dilute solutions may lead to the development of dermatitis. Exposure to the concentrated vapor of anhydrous hydrogen chloride may also result in burns or dermatitis.

EYE: Contact of the eyes with hydrogen chloride, either as a gas or in solution, rapidly causes severe and painful burns 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.

INGESTION: When concentrated hydrochloric acid is swallowed, it causes severe burns of the mucous membranes of the mouth, esophagus and stomach. The lips and mouth usually turn white and later brown. There is pain in the throat and stomach, difficulty in swallowing, intense thirst, nausea and vomiting, followed by diarrhea and in severe cases, by collapse and unconsciousness.

SECTION III - HEALTH HAZARD INFORMATION - CONTINUED

TOXICOLOGY DATA

Oral LD50 (Rat): 600 mg/Kg, Slightly Toxic
Dermal LD50 (rabbit): 7600 mg/Kg, Practically Non-Toxic
Eye Irritation (Rabbit 24 hr.): Corrosive
Skin Irritation (Rabbit 24 hr.): Corrosive
DOT Skin Corrosion (Rabbit, 4 hr.): Not Corrosive

SECTION IV - FIRE AND EXPLOSION DATA

Hydrochloric acid is a nonflammable substance in the air, but if it is allowed to come in contact with various metals, its corrosive nature will cause a reaction and hydrogen will be evolved. This can develop into a dangerously explosive situation in combination with air.

Extinguishing Media: Fire involved with hydrochloric acid can be dealt with soda ash, flaked lime, carbon dioxide, dry chemical extinguishers or water.

SECTION V - SPECIAL PROTECTION

RESPIRATORY: NIOSH/MSHA approved respirator, following manufacturer's recommendations, should be used as a precautionary measure where airborne contaminants may occur. (OSHA 1910.134)

EYE: Wear chemical safety goggles (ANSI Z87.1).

GLOVES: Wear chemical resistant rubber gloves.

OTHER CLOTHING AND EQUIPMENT: Protective head covering, face shields should be used.

SECTION VI - PHYSICAL DATA

Appearance and odor: Clear, colorless to slight yellow liquid with a sharp, pungent, irritating odor.
Boiling Point: 176°F @ 760 mm Hg
Specific Gravity: 1.1417 - 1.1789
Vapor Pressure: 32 % HCl: 0°C - 5.7 mm
Water Solubility (%): 100 %
pH (0.2% solution @ 25°C): ~2

Comments: The characteristic pungent and penetrating odor and the irritating properties of hydrogen chloride fumes is an adequate warning of its presence in air.

SECTION VII - REACTIVITY DATA

CONDITIONS TO AVOID: Hydrochloric acid will yellow upon exposure to iron, chlorine or organic substances. It has slight evidence of dissociation at temperatures above 1500°F.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen gas. Hydrochloric acid reacts with various metals and metal oxides, and with hydroxides to form the chlorides. It decomposes zeolites, slags, and many other siliceous materials to yield silicic acid; reacts with carbonates liberating CO_2 and H_2O and is oxidized in the presence of oxygen and catalyst, or by electrolysis, to produce chlorine, HCl neutralizes alkaline solutions and acts as a hydrolyzing agent for carbohydrates, esters and other chemicals. It liberates free acids from soaps and slags.

Hydrochloric acid is soluble in alcohol and aldehydes. It is completely miscible with water.

SECTION VIII - HANDLING AND STORAGE

STORAGE SEGREGATION: Storage should be located outdoors or in well ventilated areas whenever possible. Storage tanks should be vented with an adequately sized acid resistant pipe to the atmosphere at an elevation higher than the surroundings. All containers should be stored away from highly flammable substances such as oil, gasoline, paint waste and other potential fire hazards; also away from elevators, gangways and all locations where moving objects may fall upon them. Store away from devices or in direct sunlight. Storage capacity should be adequate enough to allow complete emptying of the tank truck plus an additional 25% allowance. Rubber lined steel tanks have been found to be the most satisfactory.

SECTION IX - SPILL OR LEAK PROCEDURES

SPILL/LEAK PROCEDURES: A minor spill is defined as a small quantity which can be handled routinely considering the physical and hazardous properties of the product as well as the location of the spill. Spills should be handled immediately by neutralizing and flushing the area with large amounts of water. The neutralizing agents suggested are soda ash or lime. If soda ash is used, ample ventilation should be provided. Equipment lines should be flushed with water or an alkaline solution after use and an alkaline solution before maintenance. This is practiced with the recommendation of the Manufacturing Chemists Association, Inc. Purging the equipment with an inert gas such as CO_2 is another recommended method.

SECTION XI - PREPARATION INFORMATION

For additional **non-emergency** health, safety or environmental information, call or write the following manufacturer or distributor:

Leslie's Poolmart, Inc.
3925 E. Broadway Rd., #100
Phoenix, AZ 85040
Non-Emergency Phone: 602-366-3999

SECTION XI - PREPARATION INFORMATION - CONTINUED

24 Hour Emergency Phone - CHEMTREC: 1-800-424-9300

For additional, **non-emergency** information about this product or its use, please contact:

Leslie's Swimming Pool Supplies
Regulatory Affairs Department
3925 E. Broadway Rd., #100
Phoenix, AZ 85040
Phone 602-366-3999

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