

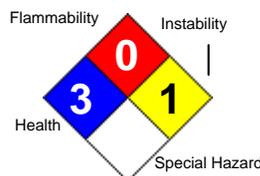
# MATERIAL SAFETY DATA SHEET

## Klean-Strip Muriatic Acid

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<b>FLAMMABILITY</b>		<b>0</b>
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<b>PPE</b>	<b>H</b>	



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Revision: 08/09/2011  
Supersedes Revision: 12/19/2005

### 1. Product and Company Identification

**Product Code:** 905  
**Product Name:** Klean-Strip Muriatic Acid  
**Reference #:** 905

**Manufacturer Information**

**Company Name:** W. M. Barr  
2105 Channel Avenue  
Memphis, TN 38113

**Phone Number:** (901)775-0100

**Emergency Contact:** 3E 24 Hour Emergency Contact (800)451-8346

**Information:** W.M. Barr Customer Service (800)398-3892

**Web site address:** www.wmbarr.com

**Preparer Name:** W.M. Barr EHS Department (901)775-0100

**Synonyms**  
GMA58

### 2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA TWA	ACGIH TWA	Other Limits
1. Hydrochloric acid {Hydrogen chloride}	7647-01-0	9.0 -36.0 %	No data.	No data.	No data.

Hazardous Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Hydrochloric acid {Hydrogen chloride}	7647-01-0	No data.	5 ppm	No data.	2 ppm)

### 3. Hazards Identification

#### Emergency Overview

Poison! Causes severe burns to eyes. Skin irritant. May be fatal if swallowed. Vapor harmful.

#### Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Inhalation of muriatic acid vapors can cause irritation of respiratory tract, burns, pulmonary edema, and coughing.

Inhalation long term exposure:

Long term exposure to muriatic acid can cause erosion of the teeth.

Skin Contact Acute Exposure Effects:

May cause severe burns, irritation, pain, and ulceration.

Skin contact long term exposure:

May cause dermatitis.

Eye Contact Acute Exposure Effects:

May cause severe burns, eye damage, and blindness.

Eye contact long term exposure:

No effects are known.

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### Ingestion Acute Exposure Effects:

Poison. May be fatal if swallowed. May cause severe irritation, perforation of the intestinal tract, and burns in mouth, pharynx, and gastrointestinal tract. May cause intense pain, nausea, vomiting, bleeding, circulating collapse, and shock.

### Signs and Symptoms Of Exposure

See potential health effects.

### Medical Conditions Generally Aggravated By Exposure

Respiratory system (including asthma and other breathing disorders)

### OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

## 4. First Aid Measures

### Emergency and First Aid Procedures

#### Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered. Obtain medical attention immediately.

#### Skin Contact:

Wash with soap and large quantities of water and remove contaminated clothing, jewelry, and shoes immediately. Wash for 15 minutes. If irritation persists, seek medical attention.

#### Eye Contact:

Immediately begin to flush with large quantities of water, remove any contact lens. Continue to flush with water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all of the eye and lid tissues. Flushing the eyes with water within several seconds is essential to achieve maximum effectiveness. Seek immediate medical attention.

#### Ingestion:

Do not induce vomiting. Give milk of magnesia or large amounts of water. Never give anything by mouth to an unconscious person. Call your poison control center, hospital emergency room or physician immediately for instructions. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops.

### Note to Physician

Call your local poison control center for further information.

The absence of visible signs or symptoms of burns does not reliably exclude the presence of actual tissue damage. Probable mucosal damage may contraindicate the use of gastric lavage.

## 5. Fire Fighting Measures

#### Flash Pt:

No data.

#### Explosive Limits:

LEL: No data.

UEL: No data.

#### Autoignition Pt:

No data available.

### Fire Fighting Instructions

Keep unnecessary people away, isolate hazard area and deny entry. Wear NIOSH approved positive -pressure self-contained breathing apparatus. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Move containers from fire if it can be done without risk.

**Flammable Properties and Hazards**

Non-flammable

**Hazardous Combustion Products**

Hydrogen chloride and toxic gases.

**Extinguishing Media**

Use extinguishing agent suitable for type of surrounding fire.

**Unsuitable Extinguishing Media**

No data available.

## 6. Accidental Release Measures

**Steps To Be Taken In Case Material Is Released Or Spilled**

**Small Spills:**

Keep unnecessary people away and isolate hazard area. Wear appropriate personal protective equipment. Take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable. Material may be neutralized with baking soda, soda ash, or dilute caustic soda. Stay upwind, out of low areas, and ventilate closed spaces before entering.

**Large Spills:**

Evacuation of surrounding area may be necessary for large spills. Wear appropriate personal protective equipment. Completely contain spilled material with dikes, sandbags, etc. Shut off ventilation system if needed. Reprocess or reuse if possible. Neutralize with soda ash or dilute caustic soda. Collect with appropriate absorbent and place into suitable container. Keep out of sewers and water supplies. This material is acidic and may lower the pH of the surface waters with low buffering capacity.

## 7. Handling and Storage

**Precautions To Be Taken in Handling**

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

When mixing, slowly add acid to water to minimize heat generation and spattering. Never add water to acid.

Keep container tightly closed when not in use. Keep container properly labeled.

**Precautions To Be Taken in Storing**

Keep container tightly closed when not in use. Store in a cool, dry place away from direct sunlight and heat to avoid container deterioration. Avoid storage at extreme high or low temperatures. Protect from freezing. Keep container properly labeled. Keep separated from incompatible substances.

Store in acid-resistant plastic, glass containers, or rubber-lined steel containers. Do not store in aluminum containers or use aluminum fittings or transfer lines.

## 8. Exposure Controls/Personal Protection

### Respiratory Equipment (Specify Type)

Where vapor concentration exceeds or is likely to exceed applicable exposure limits, a NIOSH approved respirator with acid gas cartridges is required. When an air-purifying respirator is not adequate or for spills and/or emergencies of unknown concentrations, a NIOSH approved self-contained breathing apparatus or airline respirator with full-face piece is required. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV.

For occasional consumer use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator. A dust mask does not provide protection against vapors.

### Eye Protection

Safety glasses with side shields. Wearing chemical goggles with a face shield is recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn.

Provide an emergency eyewash station or quick drench shower in the immediate work area.

### Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with products.

### Other Protective Clothing

Wear chemical resistant clothing and rubber boots when potential for contact with the material exists.

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

### Engineering Controls (Ventilation etc.)

Use closed system when possible. Provide local exhaust ventilation where vapor or mist may be generated. Ensure compliance with applicable exposure limits.

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, burning sensations, or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately.

### Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing of eyes and skin.

Wash hands thoroughly after use and before eating, drinking, or smoking. Do not eat, drink, or smoke in the work area. Discard any clothing or other protective equipment that cannot be decontaminated.

## 9. Physical and Chemical Properties

**Physical States:** [ ] Gas [ X ] Liquid [ ] Solid  
**Melting Point:** No data.  
**Boiling Point:** 120 F

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**Autoignition Pt:** No data.  
**Flash Pt:** No data.  
**Specific Gravity (Water = 1):** No data.  
**Bulk density:** 9.660 LB/GA  
**Vapor Pressure (vs. Air or mm Hg):** No data.  
**Vapor Density (vs. Air = 1):** No data.  
**Evaporation Rate:** No data.  
**Solubility in Water:** No data.  
**Percent Volatile:** 100 % by weight.

### Appearance and Odor

No data available.

## 10. Stability and Reactivity

**Stability:** Unstable [ ] Stable [ X ]

### Conditions To Avoid - Instability

No data available.

### Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, alkalis and alkali metals, mercuric sulfate, perchloric acid, carbides of calcium, cesium, rubidium, acetylides of cesium and rubidium, phosphides of calcium and uranium, lithium silicide, cyanides (which may produce lethal concentrations of hydrocyanic acid), and common and active metals (which produce flammable hydrogen gas).

### Hazardous Decomposition Or Byproducts

Thermal decomposition may produce hydrogen chloride vapors.

**Hazardous Polymerization:** Will occur [ ] Will not occur [ X ]

### Conditions To Avoid - Hazardous Polymerization

No data available.

## 11. Toxicological Information

### Toxicological Information

LC50 Rat Inhalation 3,124 ppm/1 hr

LD50 Rat Oral 238 - 277 mg/kg

LD50 Mouse Dermal 1,449 mg/kg

### Chronic Toxicological Effects

Long term exposure to muriatic acid can cause erosion of the teeth.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Hydrochloric acid (Hydrogen chloride)	7647-01-0	n.a.	3	A4	n.a.

## 12. Ecological Information

### General Ecological Information

LC50 values of acute fish toxicity tests varied from 4.92 to 282 mg/L due to the variation in buffer capacity of the test medium.

## 13. Disposal Considerations

### Waste Disposal Method

Dispose in accordance with applicable local, state, and federal regulations.

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### 14. Transport Information

#### LAND TRANSPORT (US DOT)

**DOT Proper Shipping Name** Hydrochloric acid  
**DOT Hazard Class:** 8  
**DOT Hazard Label:** CORROSIVE  
**UN/NA Number:** UN1789  
**Packing Group:** II

#### Additional Transport Information

No data available.

### 15. Regulatory Information

#### US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Hydrochloric acid {Hydrogen chloride}	7647-01-0	Yes 500 LB	Yes 5000 LB	Yes	No

#### US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Hydrochloric acid {Hydrogen chloride}	7647-01-0	HAP, ODC ()	No	Inventory, 4 Test	No

#### EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Yes  No Acute (immediate) Health Hazard

Yes  No Chronic (delayed) Health Hazard

Yes  No Fire Hazard

Yes  No Sudden Release of Pressure Hazard

Yes  No Reactive Hazard

#### Regulatory Information Statement

All components of this material are listed on the TSCA Inventory or are exempt.

### 16. Other Information

#### Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.