

MATERIAL SAFETY DATA SHEET

Klean-Strip Green Safer Muriatic Acid

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1. Product and Company Identification

Product Code: 903
Product Name: Klean-Strip Green Safer Muriatic Acid
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

GKGM75006, GKGMOPC

Synonyms for muriatic acid: hydrochloric acid solution, hydrogen chloride, aqueous hydrogen chloride

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	<25.0 %	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.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

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 learn 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.

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)

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 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.

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

May release 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 can 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:	-59 C		
Boiling Point:	110 C		
Autoignition Pt:	No data.		
Flash Pt:	No data.		
Explosive Limits:	LEL: No data.	UEL: No data.	
Specific Gravity (Water = 1):	1.092 - 1.097		
Density:	9.09 LB/GA		
Bulk density:	No data.		

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Vapor Pressure (vs. Air or mm Hg): 0.2 MM HG
Vapor Density (vs. Air = 1): > 1
Evaporation Rate (vs Butyl Acetate=1): < 1
Solubility in Water: 100 %
Percent Volatile: 100 % by weight.
Heat Value: No data.
Particle Size: No data.
Corrosion Rate: No data.
pH: < 1

Appearance and Odor

water white, free and clear

potential slight pungent odor

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 and toxic gases.

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

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

No data available.

Carcinogenicity/Other Information

No data available.

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

12. Ecological Information

This material is believed to be toxic to aquatic life.

This material is inorganic and not subject to biodegradation.

13. Disposal Considerations

Waste Disposal Method

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

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name UN1789, Hydrochloric Acid, 8, PGIII, LTD. QTY.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name UN1789, Hydrochloric Acid, 8, PGIII

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name UN1789, Hydrochloric Acid, 8, PGIII, LTD. QTY.

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

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	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

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.