



For Chemical Emergency  
Spill, Leak, Fire, Exposure, or Accident  
Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: + 1703-527-3887  
(collected call accepted)

**MATERIAL SAFETY DATA SHEET**

**PRODUCT:** Grout Off

**DISTRIBUTOR:** Tile & Floor Care Chemicals  
**DISTRIBUTORS ADDRESS:** 4340 NW 19th Ave  
Deerfield Beach  
FL 33064

**Telephone:** 954-968-3445  
**Facsimile:** 954-968-2844  
**After Hours:** 561-866-4483

**Website Address:** [www.tilecare.net](http://www.tilecare.net)  
**E-mail Address:** [enquiries@tilecare.net](mailto:enquiries@tilecare.net)

**MSDS PREPARED BY:** TFC USA  
**MSDS PREPARATION DATE:** 14/04/2010

**PREPARER TEL:** 954-968-3445

**1. Product Name:** Grout Off

**Intended Use:** Acid Cleaner  
**Chemical Name:** Hydrochloric Acid  
**Chemical Family:** Inorganic Acid  
**Synonyms:** Muriatic Acid, Hydrogen Chloride  
**Empirical Formula:** HCl Aqueous

**2. Composition / Information on hazardous ingredients**

Ingredients	CAS	LD <sub>50</sub>	LC <sub>50</sub>
Hydrochloric Acid	7647-01-0	900mg/kg	-

**3. Hazard Identification**

**Route of Entry:** Skin contact, Eye contact, Inhalation and Ingestion.  
**Emergency Overview:** **POISON! DANGER! CORROSIVE! Liquid and mist cause severe burns to all body tissue. May be fatal if swallowed or inhaled. Inhalation may cause lung damage.**  
**[WHMIS Symbols]:** Class E - Corrosive  
**Potential Health Effects:**  
**Inhalation:** Corrosive! Inhalation of vapours can cause coughing, choking, inflammation of the nose, throat and upper respiratory tract, and in severe cases, pulmonary oedema, circulatory failure and death.  
**Ingestion:** Corrosive! Swallowing Hydrochloric Acid can cause immediate pain and burns of the mouth, throat, oesophagus and gastrointestinal tract. May cause nausea, vomiting and diarrhoea. Swallowing may be fatal.  
**Skin Contact:** Corrosive! Can cause redness, pain and severe skin burns. Concentrated solutions cause deep ulcers and discolour skin.  
**Eye Contact:** Corrosive! Vapours are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.  
**Chronic Exposure:** Long-term exposure to concentrated vapours may cause erosion of teeth. Long-term exposures seldom occur due to the corrosive properties of the acid.  
**Aggravation of Pre-existing Conditions:** Persons with pre-existing skin disorders or eye disease may be more susceptible to the effects of this substance.

**4. First Aid Measures**

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing and shoes before reuse. Get medical attention.  
**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention.  
**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.  
**Ingestion:** **DO NOT INDUCE VOMITING!** Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**5. Fire Fighting Measures:**

**Flammable:** No. Extreme heat or contact with metals can release flammable hydrogen gas.  
**Means of Extinction:** If involved in a fire, use water spray. Neutralize with soda ash or slaked lime.  
**Flashpoint (°C) and Method (oc or cc):** Not available  
**Upper Flammable Limit (% by volume):** Not available  
**Lower Flammable Limit (% by volume):** Not available  
**Autoignition Temperature (°C):** Not available  
**Explosion Data - Sensitivity to Impact:** Not considered explosive  
**Explosion Data - Sensitivity to Static Discharge:** Not considered explosive  
**Hazardous Combustion Products:** Hydrogen Gas

**6. Accidental Release Measures**

**Leak & Spill Procedures:** Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime) then absorb with an inert material (e.g. vermiculite, dry sand, earth) and place in a chemical waste container. Do not use combustible materials such as saw dust. Do not flush to sewer. US Regulations (CERCLA), require reporting spills and releases to soil, water and air in excess of reportable quantities.

**7. Handling and Storage**

**Handling Procedures & Equipment:** Do not wash out container and use it for other purposes. When diluting, the acid should always be added slowly to water and in small amounts. Never use hot water and never add water to the acid. Water added to acid can cause uncontrolled boiling and splashing. When opening metal containers, use non-sparking tools because of the possibility of hydrogen gas being present. Containers of this material may be hazardous when empty since they retain product residues (vapours, liquid); observe all warnings and precautions listed for the product.  
**Storage Requirements:** Store in a cool, dry ventilated storage area with acid resistant floors and good drainage. Protect from physical damage. Keep out of direct sunlight and away from heat, water and incompatible materials.

## 8. Exposure Controls/Personal Protection

<b>Exposure Limits:</b>	
<b>ACGIH TLV:</b>	Hydrochloric Acid 2ppm (Ceiling), A4 not classified as a human carcinogen
<b>OSHA PEL:</b>	Hydrochloric Acid 5ppm (Ceiling)
<b>Engineering Controls:</b>	General; Local exhaust
<b>Personal Protective Equipment:</b>	Rubber or neoprene gloves; Respirator; Chemical safety goggles and/or a full face shield; Impervious boots; Apron, or overalls as needed to prevent skin contact.

## 9. Physical and Chemical Properties

<b>Physical State:</b>	Liquid
<b>Odour &amp; Appearance:</b>	Odour of Hydrogen Chloride; Pink
<b>Odour Threshold (ppm):</b>	0.25 to 10ppm
<b>Specific Gravity</b>	1.06 - 1.09
<b>Vapour Density (Air=1):</b>	Not available
<b>Vapour Pressure (mmHg):</b>	Hydrochloric Acid 190 @ 25°C
<b>Evaporation Rate:</b>	n/a
<b>Boiling Point (°C):</b>	Literature Azeotrope (20.2%) boils at 109°C
<b>Freezing Point (°C):</b>	Not determined
<b>pH:</b>	<3
<b>Coefficient of Water/Oil Distribution:</b>	Not available
<b>Solubility in Water:</b>	Complete miscible

## 10. Stability and Reactivity

<b>Chemical Stability:</b>	Yes - Under normal conditions of use. Container may burst when heated.
<b>Incompatibility with Other Substances:</b>	Yes - A strong mineral acid, concentrated hydrochloric acid is incompatible with many substances and highly reactive with strong bases, metals, metal oxides, hydroxides, amines, carbonates and other alkaline materials. Incompatible with materials such as cyanides, sulfides, sulfites and formaldehyde.
<b>Reactivity:</b>	Reacts with water, especially when water is added to the product. Absorption of gaseous hydrogen chloride on mercuric sulfate becomes violent @ 125°C. Sodium reacts very violently with gaseous hydrogen chloride. Calcium phosphide and hydrochloric acid undergo very energetic reaction. It reacts with oxidizers releasing chlorine gas. Incompatible with, alkali metals, carbides, borides, metal oxides, vinyl acetate, acetylides, sulphides, phosphides, cyanides, carbonates. Reacts with most metals to produce flammable Hydrogen gas. Reacts violently (moderate reaction with heat of evolution) with water especially when water is added to the product. Isolate hydrogen chloride from heat, direct sunlight, alkalis (reacts vigorously), organic materials, and oxidizers (especially nitric acid and chlorates), amines, metals, copper and alloys (e.g. brass), hydroxides, zinc (galvanized materials), lithium silicide (incandescence), sulfuric acid (increase in temperature and pressure) Hydrogen chloride gas is emitted when this product is in contact with sulfuric acid. Absorption of Hydrochloric Acid onto silicon dioxide results in exothermic reaction. Hydrogen chloride causes aldehydes and epoxides to violently polymerize. Hydrogen chloride or Hydrochloric Acid in contact with the following can cause explosion or ignition on contact.
<b>Hazardous Decomposition Products:</b>	When heated to decomposition, emits toxic hydrogen chloride fumes and will react with water or steam to produce heat and toxic and corrosive fumes. Thermal oxidative decomposition produces toxic chlorine fumes and explosive hydrogen gas.

## 11. Toxicological Information:

<b>Effect of Acute Exposure:</b>	Very hazardous in case of skin contact (corrosive, irritant, permeator) of eye contact (irritant, corrosive), of ingestion. Slightly hazardous in case of inhalation (lung sensitizer). Non-corrosive for lungs. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking or shortness of breath. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering and itching. Skin inflammation is characterized by itching, scaling, reddening or occasionally blistering.
<b>Effects of Chronic Exposure:</b>	Slightly hazardous in case of skin contact (sensitizer). The substance may be toxic to kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, circulatory system and teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation, leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
<b>Irritancy of Product:</b>	Yes
<b>Skin Sensitization:</b>	Yes
<b>Respiratory Sensitization:</b>	Yes
<b>Carcinogenicity:</b>	
<b>IARC (1, 2A or 2B):</b>	3 - Not classified for human
<b>ACGIH (A1, A2 or A3):</b>	Not available
<b>Reproductive Toxicity:</b>	Not available
<b>Teratogenicity:</b>	Not available
<b>Embryotoxicity:</b>	Not available
<b>Mutagenicity:</b>	Not available
<b>Name of Synergistic Products/Effects:</b>	Not available

## 12. Ecological Information:

<b>Aquatic Toxicity:</b>	Not available
<b>Products of Biodegradation:</b>	Not available
<b>Toxicity of the Products of Biodegradation:</b>	Not available

## 13. Disposal Considerations:

<b>Waste Disposal:</b>	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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## 14. Transport Information:

<b>Special Shipping Information:</b>	
<b>PIN:</b>	Not available
<b>TDG:</b>	Not available
<b>[DOT]:</b>	Class 8 / Corrosive Material
<b>[IMO]:</b>	Not available
<b>[ICAO]:</b>	Not available
<b>UN NUMBER:</b>	UN1789
<b>PSN:</b>	Hydrochloric Acid

**15. Regulatory Information:**

[WHMIS Classification]: Class D-2A: Material causing other toxic effects (VERY TOXIC)  
Class E: Corrosive Liquid  
[OSHA]: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)  
[SERA]: 302/304/311/312 extremely hazardous substances: Hydrochloric Acid  
[TSCA]: 8(b) inventory: Hydrochloric Acid

**16. Other Information:**

**Further Information:** The information supplied in this Safety Data Sheet is designed only as a guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication, however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such used in combination with any other materials or in any other process.

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