



SAFETY DATA SHEET HEAVY DUTY TILE CLEANER

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME HEAVY DUTY TILE CLEANER

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2. HAZARDS IDENTIFICATION

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.

J.T. Baker SAF-T-DATA Ratings (Provided here for your convenience)

Health Rating	3	Severe (Poison)
Flammability Rating	0	None
Reactivity Rating	2	Moderate
Contact Rating	3	Severe (Corrosive)
Lab Protective Equipments :	Goggles & Shield. Lab Coat & Apron. Vent Hood. Proper Gloves.	
Storage Color Code :	White (Corrosive)	

POTENTIAL HEALTH EFFECTS

INHALATION

Corrosive inhalation of vapors can cause coughing, choking, inflammation of the nose, throat and upper respiratory tract and in severe cases, pulmonary edema, circulatory failure and death.

INGESTION

Corrosive swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract. May cause nausea, vomiting and diarrhea. Swallowing may fatal.

SKIN CONTACT

Corrosive can cause redness, pain and severe skin burns. Concentrated solutions cause deep ulcers and discolor skin.

EYE CONTACT

Corrosive vapors 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 vapors 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 the substance.

3. COMPOSITION/INFORMATION ON INGREDIENTS

NAMES	CAS NO.	CONTENT	HAZARDOUS
Hydrogen Chloride	7647-01-0	16 - 20%	Yes
Water	7732-18-5	80 - 84%	No

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4. FIRST-AID MEASURES

INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention Immediately.

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.

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 before reuse. Thoroughly clean shoes before reuse. Get medical attention Immediately.

EYE CONTACT

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention Immediately.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

If involved in a fire, use water spray. Neutralize with soda ash or slaked lime.

FIRE

Extreme heat or contact with metals can release flammable hydrogen gas.

EXPLOSION

Not considered to be an explosion hazard.

SPECIAL INFORMATION

In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Structural firefighter's protective clothing is ineffective for fires involving hydrochloric acid. Stay away from ends of tanks. Cool tanks with water spray until well after fire is out.

6. ACCIDENTAL RELEASE MEASURES

SPILL CLEANUP METHODS

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section B. 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.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS

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 container, 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 (vapors, liquid) observe all warnings and precautions listed for the product.

STORAGE PRECAUTIONS

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. Do not washout container and use it for other purposes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS

OSHA Permissible Exposure Limit (PEL) 5 ppm Ceiling

ACHIH Threshold Limit Value (TLV) 5 ppm Ceiling

VENTILATION SYSTEM

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

RESPIRATORY EQUIPMENT (NIOSH Approved)

If the exposure limit is exceeded, a full facepiece respirator with an acid gas cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air supplied respirator.

WARNING : Air purifying respirators do not protect workers in oxygen- deficient atmospheres.

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SKIN PROTECTION

Rubber or neoprene gloves and additional protection including impervious boots, apron or coveralls, as needed in areas of unusual exposure to prevent skin contact.

EYE PROTECTION

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Colourless, fuming liquid
ODOR	Pungent odor of hydrogen chloride
SOLUBILITY	Infinite in water with slight evolution of heat
DENSITY	1.08
pH	For HCL solutions : 0.1 (1.0 N), 1.1 (0.1 N), 2.02 (0.01 N)
% VOLATILES BY VOLUME @ 21°C (70F)	100
BOILING POINT	53°C (127F) Azeotrope (20.2%) boils at 109°C (228F)
MELTING POINT	-74°C (-101F)
VAPOR DENSITY (AIR = 1)	No information found
VAPOR PRESSURE (mm Hg)	190@25°C (77F)
EVAPORATION RATE (BuAc=1)	No information found

10. STABILITY AND REACTIVITY

STABILITY

Stable under ordinary conditions of use and storage. Containers may burst when heated.

HAZARDOUS DECOMPOSITION PRODUCTS

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.

HAZARDOUS POLYMERIZATION

Will not occur.

INCOMPATIBILITIES

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.

CONDITIONS TO AVOID

Heat, direct sunlight.

11. TOXICOLOGICAL INFORMATION

Inhalation rat LC50: 3124 ppm/H, oral rabbit LD50: 900 mg/kg (Hydrochloric acid concentrated), investigated as tumorigen, mutagen, reproductive effector.

CANCER LISTS

NTP CARCINOGEN

INGREDIENT	KNOWN	ANTICIPATED	IARC CATEGORY
Hydrogen Chloride 7647-01-0	No	No	3
Water 7732-18-5	No	No	None

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

When released into the soil, this material is not expected to biodegrade. When released into the soil this material may reach into groundwater.

ENVIRONMENTAL TOXICITY

This material is expected to be toxic to aquatic life.

HEAVY DUTY TILE CLEANER**13. DISPOSAL CONSIDERATIONS**

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contain is accordance with federal, state and local requirement.

14. TRANSPORT INFORMATION**DOMESTIC (LAND, D.O.T.)**

Proper shipping Name	Heavy Duty Tile Cleaner
Hazard Class	8
UN/NA	UN 1789
Packing Group	II
Information reported for prouct/size	475LB

INTERNATIONAL (WATER, I.M.O.)

Proper shipping Name	Heavy Duty Tile Cleaner
Hazard Class	8
UN/NA	UN 1789
Packing Group	II
Information reported for prouct/size	475LB

15. REGULATORY INFORMATION**NFPA RATINGS**

Health	3
Flammability	0
Reactivity	0

LABEL HAZARD WARNING

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.

LABEL PRECARTIONS

Do not get in eyes, on skin or on clothing.
Do not breathe vapor or mist.
Use only with adequate ventilation.
Wash thoroughly after handling.
store in a tightly closed container.
Remove and wash contaminated clothing promptly.

LABEL FIRST AID

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed DO NOT INDUCE VOMITING! Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In all cases get medical attention Immediately.

PRODUCT USE

Laboratory Reagent.

BELT GUARDING**GUARDING REQUIREMENT**

1. Belt or chain drives located 2.6m (8ft 6in) or less above the floor or working platform shall be guarded except in the case of:
Belt or chain the location or which effectively prevents persons or their clothing from coming into contact with them.
2. Guards shall
 - a. Provide positive protection.
 - b. Prevent all access to danger zone during operations.
 - c. Cause the operation no discomfort or inconvenience.
 - d. Be durable, fire and corrosion resistant.
 - e. Not constitute a hazard by themselves (without spinters, sharp corners, rough edges, or other sources of accident).
 - f. Operate automatically or with minimum effort.
 - g. Be suitable for job and the machine.
 - h. Preferably constitute a built in feature.
 - i. Withstand long use with minimum maintenance.

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NATURAL DRAUGHT

The rate of flow of air into a combustion chamber and of products of combustion up through the chimney caused by the difference in density between the hot gases in the chimney and the cold air outside. It is thus dependent on the temperature of the hot waste gases and the height of the chimney. The rate of flow may be reduced by inter-posing a moveable shutter, called a damper between the combustion chamber and chimney.

COMBUSTION

The rapid exothermic chemical reaction of fuel with oxygen. Energy is released in the form of heat and light, and during the reaction a flame may form, with a carbonaceous fuel containing carbon, hydrogen and sulphur, combustion in air will produce a mixture, of hot gases including carbon dioxide, water vapor sulphur dioxide and nitrogen, and (as in an internal combustion engine) nitrogen) nitrogen oxides.

16. OTHER INFORMATION

TRAINING ADVICE : The details of this data sheet must be passed on to all personnel handling the product.

DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.