

8. 749-835.0



Kärcher Graffiti Remover-Brick, Masonry & Concrete Cleaner

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MATERIAL SAFETY DATA SHEET

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

Product name: Kärcher Graffiti Remover – Brick, Masonry & Concrete Cleaner
Chemical family: Mixture of Sodium Hydroxide and Surfactants in Ethanol/Hydrocarbon Solution.
Product use: Graffiti Remover

Supplier name and address:

Kärcher-Commercial

603 N. Monitor Road

Springdale, AR, U.S.A. 72764

Phone: (479)756-5874 (7:30 AM to 4:30 PM, Monday to Friday, CST)

Emergency Telephone for Leak, Spill, Fire, Exposure Call: Chemtree at 1-800-424-9300, Outside US: (703) 527-3887
Emergency Telephone for Medical Emergency Call: Rocky Mountain Poison Center at (303) 623-5716

HMIS (0 – None, 4 – Extreme)

Health: 3

Fire: 3

Reactivity: 0

SECTION 2 — HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Brown-red liquid, hydrocarbon odor.

Danger! Flammable and corrosive liquid and vapor. Contents may ignite when exposed to heat, sparks, flame and other ignition sources. Causes severe skin, eye and digestive tract burns. Harmful if swallowed. Product may enter lungs following ingestion and cause damage. Cause respiratory tract irritation. Could cause headache, drowsiness or other effects to the central nervous system. Contains material which may cause adverse liver and kidney effects. Possible developmental hazard. Contains material that may adversely affect the developing fetus. Flammable liquid; may ignite if exposed to heat, flame or other ignition source. Not reactive. Release to the environment may cause harm.

POTENTIAL HEALTH EFFECTS

Target organs: Eyes, skin, respiratory system, digestive system, liver, kidneys, central nervous system.

Routes of exposure: Skin contact, skin absorption, eye contact, inhalation, ingestion.

Signs and symptoms of short-term (acute) exposure:

Inhalation: Harmful if inhaled. Inhalation may cause severe irritation and corrosive damage to the nose, throat and upper respiratory tract. Inhalation could also cause dizziness, headache, drowsiness, nausea, vomiting and other central nervous system effects. In more severe cases, could cause pulmonary edema (fluid accumulation in lungs).

Skin: Direct contact with skin may cause corrosive burns, deep ulceration and possibly permanent scarring. Burns may not be immediately painful. Product may be absorbed.

Eyes: Direct contact with eyes may cause severe burns, ulceration and possibly permanent blindness. Vapors are irritating to the eyes.

Ingestion: If ingested, may cause severe irritation and corrosive damage to the mouth, throat and stomach, as well as adverse central nervous system effects. Symptoms may include dizziness, headache, drowsiness, nausea, vomiting, a severe burning sensation, abdominal pain, perforation of the intestinal tract and possibly death. This product may present an aspiration hazard; aspiration into the lungs following ingestion may cause life-threatening pulmonary edema or chemical pneumonitis.

Chronic effects: Repeated or prolonged exposure to low levels may result in drying, cracking and defatting of the skin (dermatitis). Prolonged or repeated inhalation exposure may cause adverse liver, kidney and nervous system effects.

Carcinogenic status: See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards: Possible birth defect hazard. For further information, see TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects: See ECOLOGICAL INFORMATION (Section 12).

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% w/w
Surfactant	Proprietary	5-10%
Alkyl Alcohol Salt	Proprietary	5-10%
Sodium Hydroxide	1310-73-2	5-10%
Solvent Naphtha (petroleum)	Proprietary	10-30%
Ethanol	64-17-5	30-60%

NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. This material is classified as hazardous under OSHA regulations (29CFR 1910.1203).



SECTION 4 — FIRST AID MEASURES

Inhalation: If inhaled, immediately remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention if adverse effect continues after removal to fresh air.

Skin contact: Immediately remove contaminated clothing and shoes. Wash skin thoroughly with mild soap and running water. Obtain medical attention if irritation persists. Launder clothing before reuse.

Eye contact: Immediately flush eyes with running water for a minimum of 15 minutes. Obtain medical attention immediately if adverse effect continues after flushing.

Ingestion: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention immediately. Guard against aspiration into the lungs.

Conditions aggravated by exposure: May aggravate pre-existing skin, eye and respiratory problems.

Recommendations to physicians: Treat symptoms and eliminate overexposure.

SECTION 5 — FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability: Flammable liquid. This material will ignite or explode when exposed to heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment). Vapors are heavier than air and will collect in low-lying areas and confined spaces. Vapors can travel to a source of ignition and flash back causing an explosion and fire. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Liquid will float and can be re-ignited at water's surface. Contact with some metals may cause release of flammable hydrogen gas.

Flammability classification (OSHA 29 CFR 1910.1200): Class IC Flammable Liquid.

Flash point: 24°C / 75.2°F

Auto-ignition temperature: Not determined for product. For main component, Ethanol: 363°C / 685°F

Oxidizing properties: None known

Lower flammable limit (% by vol.): Not determined.

Upper flammable limit (% by vol.): Not determined.

Explosion data:

Sensitivity to mechanical impact: May be sensitive to static discharge.

Sensitivity to static discharge: Not sensitive.

Suitable extinguishing media: Foam, dry chemical or carbon dioxide. Using water may be ineffective.

Special fire-fighting procedures/equipment: Firefighters should wear proper chemically protective equipment and respiratory protection as conditions warrant. Move containers from fire area if it can be done without risk. Water spray may be useful in minimizing or dispersing vapors, and cooling equipment and containers exposed to heat and flame. Avoid spreading burning liquid with water spray used for cooling purposes.

Hazardous combustion products: Carbon oxides and other irritating fumes and smoke.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal precautions: Spillages may be very slippery. Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions: Ensure spilled product and wash solution does not enter sewers or confined spaces.

Spill response/Cleanup: Eliminate all sources of ignition. Ventilate area of release. Stop leak if you can do so without risk. Use non-sparking tools. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand, earth), then place absorbent material into a suitable container for later disposal (see Section 13). Wash site of spillage thoroughly with water and suitable detergent. Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

Prohibited materials: None known.

Special spill response procedures: If a spill/release in excess of EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).

DOT/CERCLA Reportable quantity (RQ): Sodium hydroxide (RQ 1000 lbs.)



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SECTION 7 — HANDLING AND STORAGE

Safe handling procedures: This material is a flammable, corrosive liquid. Wear chemically protective equipment during handling. Use in a well-ventilated area. Avoid inhalation of vapors. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep away from heat, flame, sparks, or ignition sources. Ground all equipment during handling. Keep away from acids and other incompatible materials. Use caution when opening cap. Keep container tightly closed when not in use. Assume empty containers contain residues, which are hazardous.

General hygiene considerations: Avoid inhalation of vapors and mists. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when working. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Contaminated leather and shoes may require disposal.

Storage requirements: Store in a cool, dry, well-ventilated area away from sources of heat, ignition and sunlight. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Containers should be separated from oxidizing materials by a minimum distance of 20 ft. or by a barrier of non-combustible material at least 5 ft. high having a fire-resistance rating of at least 0.5 hours. Refer to NFPA 30, *Flammable and Combustible Liquids Code*, for additional information on storage. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

Special packaging materials: Always keep in containers made of the same materials as the supply container.

SECTION 8 — EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation and engineering controls: Local mechanical exhaust / extraction ventilation is recommended if used indoors on a continuous basis. Use explosion-proof, flame resistant construction materials. Do not use aluminium, tin, zinc, galvanized iron or wood products.

Exposure Limits:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLV _s		OSHA-PREL _s		NIOSH-REL _s		NIOSH	OTHER
		TWA mg/m ³	STEL mg/m ³	TWA mg/m ³	STEL mg/m ³	TWA mg/m ³	STEL mg/m ³	IDLH mg/m ³	
Proprietary Surfactants		NE	NE	NE	NE	NE	NE	NE	NE
Proprietary Alkyl Alcohol Salt		NE	NE	NE	NE	NE	NE	NE	NE
Sodium Hydroxide	1310-73-2	NE	2 (ceiling)	2 (8 hr)	NE	NE	NE	NE	NE
Proprietary Solvent Naphtha (petroleum)		NI	NE	NE	NE	NE	NE	NE	NI
Ethanol	64-17-5	1000	NE	1000	NI	1000	NE	1000 ppm (based on 10% of LEL)	DFG MAK _s TWA: 900 PEAK: 2x MAK 15 min. average value, 1-hr interval, 4 per shift DFG MAK Pregnancy Risk Classification: C DFG MAK Germ. Cell Mutagen Category: 5

NE: Not Established

Respiratory protection: Respiratory protection is required if airborne concentrations are above recommended TLVs or are not known. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134) or equivalent U.S. State standards, and the Canadian CSA Standard Z94.4-02, *Selection, Care and Use of Respirators*. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, in emergency situations or when oxygen levels are unknown, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

Hand protection: It is recommended that protective gloves impervious to the material be worn at all times during use. Use triple gloves for spill response. If necessary, refer to U.S. OSHA 29 CFR 1910.138 and appropriate standards of Canada.

Eye / face protection: Use chemical splash goggles when a potential for eye contact exists. A full face shield should be worn when handling more than 1 gallon of product. If necessary, refer to U.S. OSHA 29 CFR 1910.133, the Canadian CSA Standard Z94.3-02, *Industrial Eye and Face Protection*. An eyewash station and safety shower should be made available in the immediate working area.

**SECTION 8 — EXPOSURE CONTROLS AND PERSONAL PROTECTION (Continued)**

Skin protection and other protective equipment: Use body protection appropriate for task. An apron, or other impermeable body protection is suggested. Full-body chemical protective clothing is recommended for emergency response procedures. If necessary, refer to the OSHA Technical Manual (Section VII: Personal Protective Equipment), or appropriate Standards of Canada. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136 and the Canadian CSA Standard Z195-02, *Protective Footwear*. An eyewash station and safety shower should be made available in the immediate working area.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical state, odor and appearance: Brown-red liquid, hydrocarbon odor.

Specific gravity: 0.9

Solubility in water: Partially miscible.

Volatiles (% by weight): Not established.

Vapor pressure (PSIG): Not established.

Vapor density (Air = 1): >1

Boiling point: 172.4°F (78°C)

Freezing point: Not established.

Evaporation rate (n-Butyl acetate = 1): Not established.

pH: 14

SECTION 10 — REACTIVITY AND STABILITY DATA

Stability and reactivity: Stable under the recommended storage and handling conditions prescribed. Contact with aluminium, tin, zinc or galvanized iron may liberate flammable hydrogen gas. Product may absorb Carbon dioxide from the air.

Hazardous polymerization: Will not occur.

Conditions to avoid: Avoid sources of heat, flame, static discharge and direct sunlight.

Materials to avoid (incompatibles): Acids, strong oxidizing agents, ammonium compounds.

Hazardous decomposition products: *Combustion:* Ammonia. *Hydrolysis:* None known. Refer to Section 5 for additional 'Hazardous combustion products'.

SECTION 11 — TOXICOLOGICAL INFORMATION

Toxicological data: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data for components in 1% concentration or greater. Additional data is available, but is not presented in this MSDS. Contact Kärcher-Commercial for more information.

<u>Ingredients</u>	<u>LC₅₀(4hr)</u> <u>inhalation, rat</u>	<u>LD₅₀ (mg/kg)</u> <u>oral, rat</u>	<u>LD₅₀ (mg/kg)</u> <u>dermal, rabbit</u>
Ethanol	20,000 ppm / 10 hrs	760	Not established.
Sodium Hydroxide	Not established.	140	Not established.

Carcinogenicity: Components of this product are listed by agencies tracking the carcinogenic potential of chemical compounds, as follows:

Ethanol: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen); MAK-S (Substances with carcinogenic and genotoxic effects, the potency of which is considered to be so low that, provided the MAK and BAT values are observed, no significant contribution to human cancer is to be expected);
Proprietary Alkyl Alcohol Salt: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen);

None of the remaining ingredients listed are classified by IARC, ACGIH, NTP, MAK, EPA, NIOSH or OSHA as carcinogenic.

Reproductive effects, Teratogenicity, Mutagenicity: This product contains Ethanol, which is a known human reproductive toxin when ingested as alcoholic beverages. No reproductive effects have been reported following Ethanol exposure in the workplace. It is known to cause mutations to germ cells and somatic cells in animals. In addition, this material causes embryotoxicity, fetotoxicity and teratogenicity in animals, in the presence of maternal toxicity. The Proprietary Alkyl Alcohol Ethoxylate Salt component may be a potential developmental hazard by ingestion. It is known to cause mutations to germ cells and somatic cells in animals. In addition, this material causes embryotoxicity, fetotoxicity and teratogenicity in animals, in the presence of maternal toxicity.

**SECTION 11 — TOXICOLOGICAL INFORMATION (Continued)**

Sensitization to material: None known.

Synergistic materials: Not available.

Other important hazards: CNS depression may result from exposure.

SECTION 12 — ECOLOGICAL INFORMATION

Ecotoxicological information: The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters. Do not discharge product unmonitored into the environment.

Chemical fate information: There is no data available on the product itself.

SECTION 13 — DISPOSAL CONSIDERATIONS

Handling for disposal: Handle according to recommendations listed in Section 7.

Methods of disposal: Dispose in accordance with all applicable federal, state and local regulations. Contact your local, state or federal environmental agency for specific rules.

RCRA: For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 — TRANSPORTATION INFORMATION

U.S. DOT transportation regulation information: This product is classified as Dangerous Goods under regulations of the

U.S. DOT, 49 CFR as follows:

Proper Shipping Name:	Corrosive liquids, flammable, n.o.s. (Sodium hydroxide, Ethanol)
Hazard Class - Primary:	8 (Corrosive)
Identification No.:	UN 2920
Packing Group:	II
Hazard Labels:	Class 8 (Corrosive); Class 3 (Flammable)
RQ LBS:	1000 lb (sodium hydroxide)
Marine Pollutant:	None

Special Transportation Notes: This material is not permitted to be shipped under any exceptions by ground within the United States (i.e. cannot be shipped as 'Limited quantities' or 'consumer commodities'), and therefore, must be shipped as fully regulated material. Refer to 49 CFR Part 173.202 for appropriate packaging information when shipping in non-bulk containers.

Transport Canada transportation regulation information: This product is classified as Dangerous Goods, per regulations of Transport Canada. The use of the above U.S. DOT information from the U.S. 49 CFR regulations is allowed for shipments that originate in the U.S. For shipments via ground vehicle or rail that originate in Canada, the following information is applicable

Proper Shipping Name:	Corrosive liquids, flammable, n.o.s. (Sodium hydroxide, Ethanol)
Hazard Class Number and Description:	8 (Corrosive), 3 (Flammable)
UN Identification Number:	UN 2920
Packing Group:	II
Hazard Label(S) Required:	Class 8 (Corrosive); Class 3 (Flammable)
Special Provisions:	16
Explosive Limit & Limited Quantity Index:	0.5
ERAP Index:	None
Passenger Carrying Ship Index:	None
Passenger Carrying Road or Rail Vehicle Index:	1
Marine Pollutant:	None

SECTION 15 — REGULATORY INFORMATION

U.S. FEDERAL REGULATION INFORMATION:

TSCA information: All ingredients are listed on the TSCA inventory.

DOT/CERCLA Reportable Quantity (RQ): Sodium hydroxide = 1000 lb (454 kg)



SECTION 15 — REGULATORY INFORMATION (Continued)

U.S. FEDERAL REGULATION INFORMATION (continued):

SARA TITLE III:

Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present.

Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute); Delayed (Chronic); Fire.

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to TSCA notification requirements, since it does not contain any Toxic Chemical constituents.

California Proposition 65: The Ethanol component is on the Proposition 65 chemical lists; however, this listing is specifically related to alcoholic beverages and is not applicable to industrial exposure of this material.

CANADIAN FEDERAL REGULATION INFORMATION:

Canadian DSL/NDSL Inventory status: Components of this product are listed on the DSL Inventory.

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists: No component of this product is on the CEPA Priorities Substances Lists.

Canadian WHMIS classification and symbols:

Class E: Corrosive

Class B2: Flammable Liquid

Class D2A, D2B: Material Causing Other Toxic Effects (Toxicity-Irritation)



SECTION 16 — OTHER INFORMATION

Legend: ACGIH: American Conference of Governmental Industrial Hygienists	
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980	
NIOSH: National Institute of Occupational Safety and Health	HSDB: Hazardous Substances Data Bank
CAS: Chemical Abstract Services	CFR: Code of Federal Regulations
DOT: Department of Transportation	EPA: Environmental Protection Agency
IARC: International Agency for Research on Cancer	MST: Mountain Standard Time
N/Ap: not applicable	N/Av: not available
OSHA: Occupational Safety and Health Administration	NTP: National Toxicology Program
RCRA: Resource Conservation and Recovery Act	PEL: Permissible Exposure Limit
SARA: Superfund Amendments & Reauthorization Act	TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act	TWA: Time Weighted Average
RTECS: Registry of Toxic Effects of Chemical Substances	
HMIS: Hazardous Material Identification System	

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