

MATERIAL SAFETY DATA SHEET



Date Issued: 02/05/2003
 MSDS No: LCC9A
 Date Revised: 03/16/2005
 Revision No: 3

MIGHTY KLEEN

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MIGHTY KLEEN
PRODUCT DESCRIPTION: Chlorinated Alkaline Cleaning Agent
PRODUCT CODE: LCC9A
PRODUCT FORMULATION NAME: LCC9
ACTIVE INGREDIENT(S): Sodium hypochlorite 7-15%; Sodium hydroxide

MANUFACTURER

Zee Company, Inc.
 4146 S. Creek Road
 Chattanooga, TN 37406

Emergency Contact: James A. Faller
Product Stewardship: (423) 698-1401
Service Number: (423) 698-1401

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (800) 424-9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: DANGER - CORROSIVE: May cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Avoid breathing vapors. Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (urine, feces, etc.) will release chlorine gas which is irritating to eyes, lungs, and mucous membranes.

POTENTIAL HEALTH EFFECTS

EYES: Liquid and mists may severely irritate or damage the eyes.

SKIN: Irritation and possible chemical burns

INGESTION: Liquid and mists are extremely corrosive to mouth, throat, mucous membranes, and stomach. Swallowing the liquid burns the tissues, causes severe abdominal pain, delirium, coma, and collapse; swallowing large quantities can cause death.

INHALATION: Inhalation of fumes or mists causes respiratory tract irritation and irritation of mucous membranes. If sodium hypochlorite is mixed with ammonia or other chemicals, evolution of chlorine or hypochlorous acid results. These gases can produce pulmonary edema.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Severe irritation and burning

SKIN: Redness and irritation

INGESTION: Severe gastric pain, nausea and/or vomiting

INHALATION: Severe irritation of respiratory system and difficulty in breathing.

CHRONIC EFFECTS: None known

CARCINOGENICITY: Ingredients not listed.

MUTAGENICITY: None known

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: None known

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TERATOGENIC EFFECTS: None known

MEDICAL CONDITIONS AGGRAVATED: People with asthma or other lung problems may be more susceptible

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Sodium hypochlorite 7-15%	< 70	7681-52-9
Sodium hydroxide	< 5	1310-73-2

4. FIRST AID MEASURES

EYES: Flush eyes with water for at least 15 minutes and get medical attention if symptoms persist.

SKIN: Rinse skin with water for 15 minutes. If irritation persists, seek medical attention.

INGESTION: Drink milk or gelatin solution. If these are not available, drink 1 or 2 glasses of water. DO NOT give vinegar or other acids. DO NOT induce vomiting. Get prompt medical attention.

INHALATION: Remove to fresh air. If breathing has not returned to normal within a few minutes, GET MEDICAL ATTENTION.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: None

FLAMMABLE LIMITS: N/A to N/A

EXTINGUISHING MEDIA: This material is not combustible. Use extinguishing media appropriate for surrounding fire.

OTHER CONSIDERATIONS: Use water spray to cool nearby containers and structures exposed to fire.

EXPLOSION HAZARDS: Containers of this material can explode under fire conditions. Oxygen may be liberated upon contact with certain metals. Toxic fumes are liberated by contact with acids or heat. Highly exothermic reactions with organic materials and oxidizable materials may cause fires.

FIRE FIGHTING PROCEDURES: Firefighters should wear full protective gear and self-contained breathing apparatus with full face shield to protect from toxic and corrosive fumes and mists.

HAZARDOUS DECOMPOSITION PRODUCTS: HOCl, chlorine, HCl, sodium chlorate, and oxygen which depend on pH, temperature, and time.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Mop or wipe up and dispose of in DOT-approved waste container.

LARGE SPILL: Contain by diking with non-combustible absorbent material and carefully neutralize with a 5% sodium bisulfite solution. Keep non-neutralized material out of sewers, storm drains, surface waters, and soil. This product is very toxic to aquatic life.

GENERAL PROCEDURES: Action to take for large spills or leaks: Wear alkali-resistant covering and complete protective equipment including impervious gloves, impervious boots, and a self-contained breathing apparatus in the pressure demand mode or a supplied-air respirator. If the spill or leak is small, a full facepiece air-purifying cartridge respirator equipped with acid gases/mists filters may be satisfactory, in any event, always wear eye protection.

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7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep container tightly closed when not in use. Do not use pressure to empty container. Do not mix this product with other cleaning agents that may liberate chlorine gas vapors (i.e. acidic agents). Always obey hazard warnings and handle empty containers as if they were full. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

HANDLING: Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing.

STORAGE: Store in a cool, dry, well-ventilated place away from incompatible materials. Do not store near acids, oxidizable materials or organics. Do not store directly on wooden floors. Wooden pallets may be used as long as precautions are taken to prevent spillage or leakage onto pallets.

STORAGE TEMPERATURE: Minimum to (85°F) Maximum

SHELF LIFE: This product degrades with age; use it within one or two months after receipt.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)					
		EXPOSURE LIMITS			
		OSHA PEL		ACGIH TLV	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³
Sodium hypochlorite 7-15%	TWA	1.5 mg/m ³ [1]	[1]	1.5 mg/m ³	
	STEL	3 mg/m ³			
Sodium hydroxide	TWA	2 mg/m ³		2 mg/m ³	

OSHA TABLE COMMENTS:
1. OSHA STEL as chlorine is 2.9 mg/m³

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Chemical goggles or a faceshield should be used unless a full facepiece respirator is worn. It is generally recognized that contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury.

SKIN: Wear impervious gloves and rubber or other waterproof boots to prevent excessive skin contact.

RESPIRATORY: Respirator protection not normally needed since the volatility and toxicity are low. If vapors, mists, or aerosols are generated above OSHA TLV values, wear a NIOSH/MSHA-approved respirator equipped with chemical cartridges for protection against chlorine gas. A dust/mist prefilter should also be used.

PROTECTIVE CLOTHING: Wear long sleeves and water-proof apron to prevent excessive skin contact. Remove and wash contaminated clothing before wearing again.

OTHER USE PRECAUTIONS: Local mechanical exhaust ventilation capable of minimizing emissions at the point of use is recommended. An eyewash and safety shower should be nearby and ready for use.

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9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
ODOR: Chlorine or bleach
APPEARANCE: Clear liquid
COLOR: Straw
pH: > 13.0
VAPOR PRESSURE: Not Determined
VAPOR DENSITY: Not Established
BOILING POINT: Not Determined
FREEZING POINT: Not Determined
MELTING POINT: Not Determined
FLASHPOINT AND METHOD: None
SOLUBILITY IN WATER: Completely Miscible
EVAPORATION RATE: ~ 1 (Water = 1)
SPECIFIC GRAVITY: ~ 1.200 g/ml
WEIGHT PER VOLUME: 10.0 lb/gal

10. STABILITY AND REACTIVITY

STABLE: Yes
HAZARDOUS POLYMERIZATION: No
STABILITY: Stability decreases with concentration, heat, light exposure, decrease in pH and contamination with heavy metals such as nickle, cobalt, copper and iron.
POLYMERIZATION: Hazardous polymerization will not occur.
CONDITIONS TO AVOID: Do not mix this product with acids.
INCOMPATIBLE MATERIALS: Ether, ammonia, acids, reducing agents, oxidizable materials, combustible materials (such as wood, cloth), organic materials, heavy materials such as iron and copper and their alloys, dirt, detergents. magnesium, aluminum, tin, manganese, zinc, and nitro compounds.

11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY

IARC: Ingredients not listed.
NTP: Ingredients not listed.
OSHA: Ingredients not listed.

12. ECOLOGICAL INFORMATION

GENERAL COMMENTS: This product is toxic to fish. Do not discharge into lakes, streams, ponds, or public waterways unless in accordance with NPDES permit. For guidelines contact the regional office of the U.S. Environmental Protection Agency.

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13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with Federal, State and local regulations.
EMPTY CONTAINER: Triple rinse with water then offer for reconditioning or disposal.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: CORROSIVE LIQUIDS, N.O.S. (contains Sodium Hydroxide and Sodium Hypochlorite)

TECHNICAL NAME: CORROSIVE LIQUIDS, N.O.S. (contains Sodium Hydroxide and Sodium Hypochlorite)

PRIMARY HAZARD CLASS/DIVISION: 8

UN/NA NUMBER: UN1760

PACKING GROUP: II

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Reporting required for inventory above TPQ

PRESSURE GENERATING: No **REACTIVITY:** Yes **ACUTE:** Yes

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: Reporting is required for releases of this material in excess of the threshold quantity.

THRESHOLD QUANTITY: 3300 pounds

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Same as section 304

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: INGREDIENTS LISTED

16. OTHER INFORMATION

APPROVED BY: James A. Faller **TITLE:** Director of Operations

PREPARED BY: Walter Brown

INFORMATION CONTACT: James Faller

REVISION SUMMARY: Revision #: 3 This MSDS replaces the March 15, 2005 MSDS. Any changes in information are as follows: In Section 14 DOT Proper Shipping Name DOT Technical Name DOT UN/NA Number DOT Packing Group

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HMIS RATING

HEALTH:	2
FLAMMABILITY:	0
PHYSICAL HAZARD:	1
PERSONAL PROTECTION:	B

GENERAL STATEMENTS: The information contained herein is believed to be accurate but is not warranted to be so. Users are advised to confirm in advance of need that information is current, applicable, and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.