

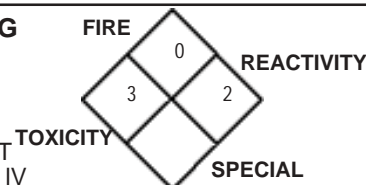


KLEENCO[®]
FOR QUALITY, VALUE AND PERFORMANCE

KLEENCO PRODUCTS, INC.
• P.O. BOX 1786 • Bellevue, WA. 98009

TELEPHONE NUMBER
Reg. Phone
206-641-8888
For Emergency Assistance
Call Infotrac **(800) 535-5053**

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT
* = SEE SECTION IV



MATERIAL SAFETY DATA SHEET

PRODUCT NAME CHALLENGE	DATE ISSUED	04-28-93	CODE 005-0203	DOT HAZARD Corrosive UN-1759
	PREPARED BY	Dale R. Silbaugh		
FORMULA Proprietary	CHEMICAL NAMES AND OR SYNONYMS Powdered Cleaning Compound			

I - COMPOSITIONAL INFORMATION/SARA III INFORMATION

INGREDIENTS	CAS NUMBER	OCCUPATION EXPOSURE LIMITS			VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
Sodium Hydroxide - dry Reportable Quantity 1000 Pounds	1310-73-2	2 mg/m3	2 mg/m3	None	Not Applicable	<10.0

No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and 40 CFR 342. **NOTE:** The precise composition of this mixture is proprietary. A more complete description will be provided to a physician in the event of a medical emergency.

II - PHYSICAL PROPERTY INFORMATION

APPEARANCE and ODOR Free flowing, dry white/yellow powder			
MELTING POINT Not Applicable	BOILING POINT Not Applicable	COATING V.O.C. Not Applicable	EVAPORATION RATE Slower than ether
SOLUBILITY IN WATER Complete	SPECIFIC GRAVITY (Water = 1) 0.9	VAPOR DENSITY Not Applicable	

III - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT Not Applicable	AUTO IGNITION TEMPERATURE Not Available	LOWER EXPLOSION LIMIT (%) Not Applicable	UPPER EXPLOSION LIMIT (%) Not Applicable
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EXTINGUISHING MEDIA

FOAM CO₂ DRY CHEMICAL WATER SPRAY OTHER

SPECIAL FIRE FIGHTING PROCEDURES For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Read the entire MSDS.

UNUSUAL FIRE AND EXPLOSION HAZARDS Highly caustic. Avoid physical contact with material.

IV - HEALTH HAZARD INFORMATION

THRESHOLD LIMIT VALUE Not Established	ROUTE(s) OF ENTRY:	<input checked="" type="checkbox"/> INHALATION See Health Hazards	<input checked="" type="checkbox"/> SKIN See Health Hazards	<input checked="" type="checkbox"/> INGESTION See Health Hazards
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HEALTH HAZARDS (Acute and Chronic) CHRONIC EFFECTS OF EXPOSURE: No known chronic effects. ACUTE EFFECTS OF EXPOSURE: Corrosive to all body tissues with which it comes in contact. The effect of local dermal exposure may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis. Similarly, inhalation of dust, spray or mist may result in varying degrees of irritation or damage to the respiratory tract tissues and an increased susceptibility to respiratory illness. These effects only occur when the TLV is exceeded. HUMAN DERMAL EXPOSURE: Regardless of concentration, the severity of damage and extent of its irreversibility increases with length of contact time. Prolonged contact with even dilute sodium hydroxide solution can cause a high degree of tissue destruction. The latent period, following skin contact during which no sensation of irritation occurs, varies from several hours for 0.4 - 4% solutions to 3 minutes for 25-50% solutions.

CARCINOGENICITY: NTP IARC Monographs OSHA Regulated
Not considered to be a carcinogen

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: Airborne concentrations of dust, mist or spray of this product may cause damage to the upper respiratory tract and the lung tissue which could produce chemical pneumonia depending upon severity of exposure. SKIN: This product is destructive to tissues contacted and produces severe burns. A latent period may exist between exposure and sense of irritation. EYE CONTACT: This product is destructive to eye tissues on contact. Will cause severe burns that result in damage of the mouth, throat, esophagus and stomach. INGESTION: This product, if swallowed, can cause severe burns and complete tissue perforation of mucous membranes of the mouth, throat, esophagus and stomach.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Skin irritation may be aggravated in persons with existing skin lesions. Breathing of dust may aggravate acute or chronic asthma and other chronic pulmonary disease.

EMERGENCY AND FIRST AID PROCEDURES

EYES: If this chemical contacts the eyes, immediately wash the eyes with large amounts of water and continue flushing for 15 minutes, occasionally lifting the lower and upper lids. Get medical attention immediately. Flushing eyes within several seconds is essential to achieve maximum effectiveness. Contact lenses should not be worn when working with this chemical. SKIN: If this chemical contacts the skin, immediately wash the contaminated skin with water for at least 15 minutes. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin with water promptly. Wash contaminated clothing and footwear before reuse. Discard footwear which cannot be decontaminated. If irritation persists after washing, get medical attention. INHALATION: If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, perform mouth-to-mouth resuscitation. Keep the affected person warm and at rest. Get medical attention as soon as possible. INGESTION: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. If available, give several glasses of milk. If vomiting occurs spontaneously, keep airway clear. SEEK MEDICAL ATTENTION IMMEDIATELY.

V - REACTIVITY INFORMATION

<input checked="" type="checkbox"/> STABLE	<input type="checkbox"/> UNSTABLE	CONDITIONS TO AVOID Under normal conditions of use, this material is stable.	
HAZARDOUS DECOMPOSITION PRODUCTS None known.			
HAZARDOUS POLYMERIZATION	<input type="checkbox"/> MAY OCCUR	<input checked="" type="checkbox"/> WILL NOT OCCUR	CONDITIONS TO AVOID Avoid contact with water. See Section VIII.
INCOMPATIBILITY (Materials to avoid) Avoid contact with aluminum, tin, zinc and alloys containing these metals. Do not mix with strong acids without dilution and agitation to prevent violent or explosive reaction. Avoid contact with leather, wool, acids, organic halogen compounds and organic nitro compounds.			

VI - SPILL OR LEAK PROCEDURE INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED		Stop the source of leak or release. Clean up releases as soon as possible, observing precautions in Special Protective Information. Liquid spills should be removed using a vacuum truck. Solid spills should be scooped up and placed in approved containers for disposal. Spills or releases should be reported as required, to the appropriate local, state and federal regulatory agencies.
WASTE DISPOSAL METHODS		Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. The materials resulting from clean-up operations may be hazardous waste and, therefore, subject to specific regulations. Contact local environmental authorities for approved disposal of this material.

VII - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE		Local mechanical exhaust ventilation, capable of maintaining emissions at the point of use below the PEL.
RESPIRATORY PROTECTION		Any dust respirator.
PROTECTIVE GLOVES	Impervious	EYE PROTECTION Wear chemical safety goggles plus full face shield to protect against splashing.
OTHER PROTECTIVE EQUIPMENT Wear appropriate equipment to prevent any possibility of skin contact.		

VIII - STORAGE AND HANDLING INFORMATION

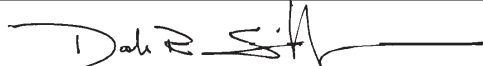
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE		Do not get into eyes, on skin, on clothing. Avoid breathing dust, mists or spray. Do not take internally. Use with adequate ventilation and employ respiratory protection when exposure to dust, mist or spray is possible. When handling, wear chemical splash goggles, face shield, rubber gloves and protective clothing. Wash thoroughly after handling or contact - exposure can cause burns which are not immediately painful or visible. Keep container closed. Product can react violently with water, acids and other substances. Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and can cause death. SPECIAL MIXING AND HANDLING INSTRUCTIONS: Product can react violently with water. Considerable heat is generated when product is mixed with water. Therefore, when making solutions always carefully follow these steps: ALWAYS wear All protective clothing describe above. NEVER add water to product. ALWAYS add product - with constant stirring - slowly to surface of lukewarm (80-100°F) water, to assure product is being completely dissolved as it is added. ALWAYS empty and clean containers of all residues before adding product, to avoid possible EXPLOSIVE reaction between product and unknown residue. All residual product should be removed from containers prior to disposal.
OTHER PRECAUTIONS		Read and follow label instructions. The label contains information necessary for the proper use of the product. Containers, even those that have been emptied, will retain product residue and vapors. Always obey hazard warnings and handle empty containers as if they were full.

IX - TOXICITY INFORMATION

Sodium Hydroxide is a corrosive material. Acute Oral Toxicity LD50 (rat) 140-340 mg/kg Acute Dermal Toxicity LD50 (rabbit) 1350 mg/kg	
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X - MISCELLANEOUS INFORMATION

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and the removal of the material from eyes, skin and clothing.

PRODUCT CODE 005-0203	NA = NOT AVAILABLE	DATE OF ISSUE 04-28-93	SUPERSEDES Any previous MSDS	SIGNED 
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