



MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

PRODUCT NAME: KLEEN BRITE
PART #: KB1GN, KB2GN, KB55GN

(NFPA RATINGS)
HEALTH: 4
FIRE: 0
REACTIVITY: 1
HMIS PROTECTIVE EQUIPMENT: X See your supervisor

PRODUCT INFORMATION (800) 262-0012	MEDICAL EMERGENCY (856) 455-4555
TRANSPORTATION EMERGENCY CHEMTREC (800) 424-9300	DISTRIBUTOR / MANUFACTURER NATIONAL REFRIGERANTS, INC. 661 KENYON AVE. ROSENHAYN, NJ

HAZARDOUS INGREDIENTS

OSHA HAZARDOUS COMPONENTS (29CFR 1910.1200) **EXPOSURE LIMITS: 8 HR. TWA**

	<u>CAS #</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
PHOSPHORIC ACID	7664-38-2	1mg/m3 STEL 3mg/m3	1mg/m3 STEL 3mg/m3
HYDROFLUORIC ACID	7664-39-3	3 ppm (F) STEL 6 ppm (F)	CL 3 ppm (F)

HAZARDS IDENTIFICATIONS

EMERGENCY OVERVIEW: DANGER! CORROSIVE TO ALL BODY TISSUES. AVOID CONTACT WITH SKIN OR EYES. HARMFUL IF INHALED OR SWALLOWED.

POTENTIAL HEALTH EFFECTS:

INHALATION: INHALATION OF VAPOR OR MIST IS CORROSIVE TO RESPIRATORY TRACT. SYMPTOMS INCLUDE COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.

EYE CONTACT: LIQUID OR VAPORS ARE CORROSIVE TO EYES. IMMEDIATE IRRITATION FOLLOWED BY DESTRUCTION OF TISSUE.

SKIN CONTACT: THIS MATERIAL IS CORROSIVE TO ALL BODY TISSUES. FULL EXTENT OF DAMAGE MAY NOT BE APPARENT FOR 12-24 HOURS AFTER EXPOSURE. SEVERE BURNS ARE SLOW HEALING. GANGRENE MAY FOLLOW DAMAGE.

INGESTION: CORROSIVE, MODERATELY TOXIC, CAUSES NAUSEA, VOMITING, LOSS OF CONSCIOUSNESS.

CHRONIC EFFECTS: DAMAGE TO KIDNEYS AND LIVER (PHOSPHORIC ACID). CHANGES IN BONES OR JOINTS (HYDROFLUORIC ACID).

CARCINOGENITY: LISTED IN NTP? NO IARC ? NO OSHA REGULATED? NO



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FIRST AID MEASURES

INHALATION: Ensure the victim's clothing or skin has not been contaminated by the acid before removing the victim to fresh air. If breathing has stopped, begin artificial respiration. Call ambulance immediately for assistance.

EYE CONTACT: Flush eyes with water for 15 minutes with copious cool flowing water. If only one eye is affected, be careful not to flush contaminated water into the other eye. Tilt the head in the direction of the affected eye while flushing. Take the victim to a medical facility immediately, and apply ice water compress during transport.

SKIN CONTACT: Move the victim immediately under an emergency shower or other water source and flush the affected area with large amounts of cool running water. Immediately washing off the acid is of primary importance. Remove all contaminated clothing while flushing with water. If there is a large area of exposure, arrange for emergency medical assistance while the victim is being rinsed with water. Immediately after flushing with water, begin massaging calcium gluconate gel into the burn site, apply gel every 15 minutes and massage until pain/redness resolves or until medical care is available. The first aider should wear gloves when applying the gel to prevent transfer of the acid.

INGESTION: DO NOT INDUCE VOMITING. Rinse mouth out with water. Call an ambulance immediately for assistance.

FIRE FIGHTING MEASURES

FLASH POINT (F): NONE

FLAMMABILITY LIMIT: LOWER N/A UPPER N/A

AUTOIGNITION TEMPERATURE: N/A

GENERAL HAZARD: TOXIC FUMES PRODUCED IN FIRE.

FIRE FIGHTING INSTRUCTIONS: APPROACH FIRE FROM UPWIND SIDE. AVOID BREATHING SMOKE, FUMES, MIST, OR VAPORS ON THE DOWNWIND SIDE. FIREFIGHTERS WEAR PROTECTIVE CLOTHING AND SELF-CONTAINED BREATHING APPARATUS.

EXTINGUISHING MEDIA: DRY POWDER, CARBON DIOXIDE (CO₂), WATER FOG OR SPRAY.

HAZARDOUS COMBUSTION PRODUCTS: SMOKE, IRRITATING VAPORS, TOXIC FUMES OF PO_x, AND CORROSIVE FUMES, CO, CO₂.

ACCIDENTAL RELEASE MEASURES

LAND SPILL:

EMERGENCY RESPONSE COORDINATOR MUST HAVE MANDATED TRAINING.

ELIMINATE ALL IGNITION SOURCES. SMALL SPILLS: PICK UP WITH ABSORBENT MATERIALS AND PLACE IN NON-LEAKING CONTAINERS; SEAL TIGHTLY FOR PROPER DISPOSAL OR REUSE. LARGE SPILLS: EVACUATE THE HAZARD AREA OF UNPROTECTED PERSONNEL. WEAR APPROPRIATE RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS.

WATER SPILL: NOTIFY PROPER AUTHORITIES.

CLEAN-UP LEAKS/SPILLS IMMEDIATELY TO PREVENT SOIL OR WATER CONTAMINATION.



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HANDLING AND STORAGE

HANDLING: AVOID CONTACT WITH SKIN, EYES, AND CLOTHING. AFTER HANDLING THIS PRODUCT, WASH HANDS BEFORE EATING, DRINKING OR SMOKING. IF CONTACT OCCURS, REMOVE CONTAMINATED CLOTHING. IF NEEDED, TAKE FIRST AID ACTION SHOWN ABOVE. LAUNDRER CONTAMINATED CLOTHING BEFORE REUSE.

STORAGE: STORE AWAY FROM FOODSTUFFS, ALKALINE MATERIALS.

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: LOCAL EXHAUST VENTILATION RECOMMENDED.

PERSONAL PROTECTION: IF TLV IS EXCEEDED WEAR NIOSH APPROVED RESPIRATOR. USE HEAVY RUBBER TYPE GLOVES, FULL FACE SHIELD AND BOOTS, APRONS, DRENCH SHOWERS, EYEWASH AS NEEDED FOR PROTECTION AGAINST SPILLS AND/OR SPLASHES.

PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE:	ND	VAPOR DENSITY (AIR=1):	>1
SPECIFIC GRAVITY (H2O=1):	1.15	EVAPORATION RATE: (BuAc =1):	>1
SOLUBILITY IN WATER:	COMPLETE	VOC:	0%
pH	<2.0	FREEZING POINT:	ND
BOILING POINT:	212 DEG. F		
APPEARANCE AND ODOR:	PINK LIQUID, PUNGENT ODOR		

STABILITY AND REACTIVITY

STABILITY: STABLE

CONDITIONS TO AVOID: HIGH TEMPERATURES

MATERIALS TO AVOID: ALKALINE MATERIALS, MAY REACT WITH METALS TO PRODUCE HYDROGEN GAS

HAZARDOUS DECOMPOSITION PRODUCTS: CORROSIVE F FUMES, TOXIC PO_x FUMES, FROM COMBUSTION-SMOKE, CO, CO₂

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

TOXICOLOGICAL INFORMATION

PHOSPHORIC ACID	LDLo: 220 mg/kg	(unr-man)
	LD50: 1530 mg/kg	(oral-rat)
	LD50: 2740 mg/kg	(skin-rat)
HYDROFLUORIC ACID	LCLo: 50ppm / 30 M	(inh-human)
	LC50: 966 ppm / 1 hr	(inh-rat)
	TCLo: 100 mg/m ³	(inh-human) NOSE, EYE, PUL



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ECOLOGICAL INFORMATION

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS.
 PHOSPHORIC ACID 138 ppm /24 HR / MOSQUITO FISH / TLm / FRESHWATER
 HYDROFLUORIC ACID 60 ppm /FISH/ LETHAL / FRESHWATER

DISPOSAL CONSIDERATIONS

DISPOSE AS HAZARDOUS WASTE. CLASSIFICATION AND DOCUMENTATION IS REQUIRED BEFORE DISPOSAL. FOLLOW ALL FEDERAL, STATE AND LOCAL REGULATIONS.

TRANSPORTATION INFORMATION

DOMESTIC--OTHER THAN AIR (DOT)

UN NUMBER: UN3264
PROPER SHIPPING NAME: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
 (HYDROFLUORIC ACID, PHOSPHORIC ACID)
HAZARD CLASS: 8
PACKING GROUP: II
 DOT Emergency Guide #: 154
 Reportable Quantity (RQ): NA
 International: UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (hydrofluoric acid, phosphoric acid), 8, PG II

REGULATORY INFORMATION

TSCA (TOXIC SUBSTANCE CONTROL ACT): COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY.

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT): REPORTABLE QUANTITY IS 100 LBS. (HYDROFLUORIC ACID). CONTACT LOCAL AUTHORITIES FOR OTHER REPORTING REQUIREMENTS.

SARA TITLE III (SUPERFUND AMENDMENTS REAUTHORIZATION ACT):

SECTION 302 THRESHOLD PLANNING QUANTITY IS 65 GALLONS (HYDROFLUORIC ACID)
 SECTION 313 HYDROGEN FLUORIDE (CAS# 7664-39-3) 8-15%

CALIFORNIA PROPOSITION 65: NOT LISTED.

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DATE OF LATEST REVISION/REVIEW: 12/2012
PERSON RESPONSIBLE FOR MSDS: Matt Callahan