



# 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

<b>PRODUCT INFORMATION</b> (800) 262-0012	<b>MEDICAL EMERGENCY</b> (856) 455-4555
<b>TRANSPORTATION EMERGENCY</b> CHEMTREC (800) 424-9300	<b>DISTRIBUTOR / MANUFACTURER</b> 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



## 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 (CO<sub>2</sub>), WATER FOG OR SPRAY.

**HAZARDOUS COMBUSTION PRODUCTS:** SMOKE, IRRITATING VAPORS, TOXIC FUMES OF PO<sub>x</sub>, AND CORROSIVE FUMES, CO, CO<sub>2</sub>.

## 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.



## 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. LAUNDRY 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

<b>VAPOR PRESSURE:</b>	ND	<b>VAPOR DENSITY (AIR=1):</b>	>1
<b>SPECIFIC GRAVITY (H<sub>2</sub>O=1):</b>	1.15	<b>EVAPORATION RATE: (BuAc =1):</b>	>1
<b>SOLUBILITY IN WATER:</b>	COMPLETE	<b>VOC:</b>	0%
<b>pH</b>	<2.0	<b>FREEZING POINT:</b>	ND
<b>BOILING POINT:</b>	212 DEG. F		
<b>APPEARANCE AND ODOR:</b>	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<sub>x</sub> FUMES, FROM COMBUSTION-SMOKE, CO, CO<sub>2</sub>

**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 <sup>3</sup>	(inh-human) NOSE, EYE, PUL



**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)**

PROPER SHIPPING NAME: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(HYDROFLUORIC ACID, PHOSPHORIC ACID)  
HAZARD CLASS: 8  
UN NUMBER: UN3264  
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:**  
**PERSON RESPONSIBLE FOR MSDS:**

10/09  
Ray Madariaga