



KENCRO

CHEMICALS

**PRODUCT: POTASSIUM HYDROXIDE SOLUTION
(CAUSTIC POTASH 45%)**

SECTION 1: PRODUCT INFORMATION

T.D.G. CLASSIFICATION	8
UN NUMBER	1814
PACKING GROUP	II
PRODUCT NAME	CAUSTIC POTASH
WHMIS CLASSIFICATION	D-1B, E
CHEMICAL FORMULA	KOH
MOLECULAR WEIGHT	56.1
CHEMICAL FAMILY	POTASSIUM HYDROXIDE 45%
MATERIAL USE	N.AV.

SECTION 2: HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	T.L.V.	C.A.S. #	LD/50,ROUTE,SPECIE	LC/50,ROUTE,SPECIE
POTASSIUM HYDROXIDE	45	2 MG/M ³	1310-58-3	365 MG/KG (ORAL,RAT)	N.AV.
WATER	BALANCE		007731-18-5		

SECTION 3: PHYSICAL DATA

PHYSICAL STATE	LIQUID
APPEARANCE	CLEAR TO COLOURLESS
ODOUR	ODOURLESS
ODOUR THRESHOLD	N.AV.
VAPOUR PRESSURE (MMHG)	2 @ 20°C
VAPOUR DENSITY (AIR=1)	N.AP.
EVAPORATION RATE	NO DATA
BOILING POINT	133°C
FREEZING POINT	-30°C
PH	STRONG ALKALI
SPECIFIC GRAVITY (WATER=1)	1.45 @ 15.5°C
SOLUBILITY IN WATER (% W/W)	COMPLETE
COEFFICIENT OF WATER/OIL DISTRIBUTION	N.AV.

SECTION 4: FIRE AND EXPLOSION DATA

FLAMMABILITY	NOT FLAMMABLE
IF YES, UNDER WHICH CONDITIONS?	
EXTINGUISHING MEDIA	NON-FLAMMABLE
SPECIAL PROCEDURES	DO NOT SPRAY WATER DIRECTLY ON MATERIAL. WEAR FULL PROTECTIVE EQUIPMENT INCLUDING A SELF-CONTAINED BREATHING APPARATUS
FLASH POINT(C), METHOD	NONE
AUTO IGNITION TEMPERATURE	N.AP.
T.D.G. FLAM. CLASS	NOT REGULATED

PRODUCT: POTASSIUM HYDROXIDE SOLUTION (CAUSTIC POTASH)

UPPER FLAMMABLE LIMIT(UFL) (% BY VOL)	N.AP.
LOWER FLAMMABLE LIMIT(LFL) (% BY VOL)	N.AP.
UNUSUAL FIRE AND EXPLOSION HAZARDS	AVOID THE USE OF A STREAM OF WATER TO CONTROL FIRES SINCE FROTHING CAN OCCUR. CONTACT WITH ORGANIC LIQUIDS OR VAPOURS MAY CAUSE IMMEDIATE FIRE OR EXPLOSION, ESPECIALLY IF HEATED. MAY GENERATE FLAMMABLE, POTENTIALLY EXPLOSIVE HYDROGEN GAS ON CONTACT WITH MOST METALS. DO NOT USE A SOLID STREAM OF WATER
HAZARDOUS COMBUSTION PRODUCTS	NONE. CONTACT WITH METALS SUCH AS ALUMINUM, TIN, AND ZINC GENERATES HYDROGEN WHICH IS FLAMMABLE AND/OR EXPLOSIVE WHEN IGNITED.
EXPLOSION DATA	
SENSITIVITY TO STATIC DISCHARGE	N.AV.
SENSITIVITY TO IMPACT	N.AV.
RATE OF BURNING	N.AV.
EXPLOSIVE POWER	N.AV.

SECTION 5: REACTIVITY DATA

CHEMICAL STABILITY	
YES	STABLE UNDER NORMAL AND FIRE CONDITIONS
NO, WHICH CONDITIONS?	
COMPATIBILITY WITH OTHER SUBSTANCES:	
YES	
NO, WHICH ONES?	CHLORINATED HYDROCARBONS, STRONG ACIDS, PEROXIDES, ALUMINUM, TIN, LEAD, ZINC, COPPER, BRONZE AND BRASS
REACTIVITY CONDITIONS	SEE BELOW
HAZARDOUS POLYMERIZATION CONDITIONS TO AVOID	WILL NOT OCCUR TRICHLOROETHYLENE WILL REACT TO FORM DICHLORACETYLENE WHICH IS SPONTANEOUSLY FLAMMABLE
HAZARDOUS PRODUCTS OF DECOMPOSITION	FLAMMABLE HYDROGEN GAS MAY BE GENERATED WHEN KOH AND CERTAIN METALS REACT

SECTION 6: TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY	
SKIN CONTACT	CONTACT WITH SOLID OR CONCENTRATED SOLUTIONS CAN CAUSE DEEP AND SEVERE SKIN BURNS, ULCERATION AND SCARRING. PAINFUL TISSUE DESTRUCTION MAY RESULT AND THE SENSATION OF PAIN MAY BE DELAYED
SKIN ABSORPTION	N.AV.
EYE CONTACT	EXTREMELY CORROSIVE, CAUSES CORNEAL SCARRING AND CLOUDING. GLAUCOMA, CATARACTS AND PERMANENT BLINDNESS MAY OCCUR. DAMAGE MAY BE DELAYED AND MAY NOT BE INITIALLY APPARENT
INHALATION	MIST AND DUST MAY CAUSE SEVERE IRRITATION OF NOSE, THROAT AND LUNGS
INHALATION, CHRONIC INGESTION	N.AV. MAY CAUSE PAIN, VOMITING AND SEVERE BURNS OF MOUTH AND THROAT ANDEXTENSIVE DAMAGE OR PERFORATION OF THE ESOPHAGUS. MAY BE FATAL.
EFFECTS OF ACUTE EXPOSURE	REFER TO ROUTE OF ENTRY
EFFECTS OF CHRONIC EXPOSURE	SEE ABOVE
LD 50 MATERIAL, SPECIES & ROUTE	SEE SECTION II
LC 50 MATERIAL, SPECIES & ROUTE	SEE SECTION II
EXPOSURE LIMIT OF MATERIAL	ACGIH TLV - CEILING 2MG/M ³
IRRITANCY OF MATERIAL	SEE ABOVE

PRODUCT: POTASSIUM HYDROXIDE SOLUTION (CAUSTIC POTASH)

SENSITIZING CAPABILITY OF MATERIAL	N.A.V.
CARCINOGENICITY OF MATERIAL	THERE HAVE BEEN NO DOCUMENTED EFFECTS DUE TO LONG-TERM EXPOSURE TO POTASSIUM HYDROXIDE. POTASSIUM HYDROXIDE HAS BEEN IMPLICATED AS A CAUSE OF CANCER OF THE ESOPHAGUS IN INDIVIDUALS WHO HAVE INGESTED IT.
REPRODUCTIVE EFFECTS	NO INFORMATION IS AVAILABLE AND NO ADVERSE REPRODUCTIVE EFFECTS ARE ANTICIPATED.
MUTAGENICITY DATA	NO INFORMATION IS AVAILABLE AND NO ADVERSE MUTAGENIC EFFECTS ARE ANTICIPATED
TERATOGENICITY DATA	NO INFORMATION IS AVAILABLE AND NO ADVERSE TERATOGENIC EFFECTS ARE ANTICIPATED
SYNERGISTIC MATERIALS	NONE KNOWN

SECTION 7: PREVENTATIVE MEASURES

GLOVES/TYPE	RUBBER, NEOPRENE GLOVES
RESPIRATORY/TYPE	A NIOSH/MSHA APPROVED AIR-PURIFYING RESPIRATOR EQUIPPED WITH DUST MIST, FUME CARTRIDGES FOR CONCENTRATIONS UP TO 20 MG/M ³ POTASSIUM HYDROXIDE. AN AIR SUPPLIED RESPIRATOR IF CONCENTRATIONS ARE HIGHER OR UNKNOWN.
EYE/TYPE	USE CHEMICAL GOGGLES. FULL FACE SHIELD IN ADDITION TO GOGGLES MAY BE DESIRABLE TO PROTECT FACE.
FOOTWEAR/TYPE	RUBBER SAFETY BOOTS
CLOTHING /TYPE	PROTECTIVE CLOTHING MADE FROM RUBBER, NEOPRENE, NITRILE OR PVC SHOULD BE IMPERVIOUS UNDER CONDITIONS FOR USE. USER SHOULD VERIFY IMPERMEABILITY UNDER NORMAL CONDITIONS OF USE PRIOR TO GENERAL USE
OTHER/TYPE	RUBBER, NEOPRENE OR VINYL APRON. SAFETY SHOWERS AND EYEWASH FOUNTAINS MUST BE INSTALLED IN STORAGE AND HANDLING AREAS.
ENGINEERING CONTROLS	GOOD GENERAL AREA VENTILATION
LEAK/SPILL	AREA WILL BE SLIPPERY UNTIL CLEANED, USE CARE TO AVOID FALLING. STOP AND CONTAIN LEAK OR SPILL. VENTILATE AREA. PROTECTIVE EQUIPMENT MUST BE WORN. DYKE WITH INERT MATERIAL (SAND, EARTH, ETC). DO NOT ALLOW ENTRY INTO WATERWAYS. PUMP INTO STEEL OR PLASTIC CONTAINERS FOR RECLAIM OR DISPOSAL. FOR SMALL SPILLS: NEUTRALIZE AND FLUSH AREA WITH WATER; PREVENT WASHINGS FROM ENTERING WATERWAYS.
WASTE DISPOSAL	DISPOSAL OF CAUSTIC POTASH MUST MEET ALL FEDERAL, PROVINCIAL AND LOCAL REGULATIONS.
HANDLING PROCEDURES AND EQUIPMENT	AVOID CONTACT WITH EYES, SKIN AND CLOTHING. WASH THOROUGHLY AFTER HANDLING. AVOID CREATING MISTS. USE ADEQUATE VENTILATION. KEEP CONTAINER CLOSED. WEAR NEOPRENE GLOVES IF DIRECT CONTACT LIKELY; WEAR EYE PROTECTION. MAINTAIN A GOOD PERSONAL HYGIENE. PROTECT CONTAINERS AGAINST PHYSICAL DAMAGE. WHEN DILUTING, ADD CAUSTIC POTASH LIQUID SLOWLY TO WATER TO AVOID BOILING AND SPLATTERING.
STORAGE NEEDS	SOLUTIONS SHOULD BE STORED IN A COOL AREA, ABOVE THEIR FREEZING POINT. FOR CAUSTIC POTASH SOLUTIONS, MILD STEEL MAY BE USED IF THE STORAGE TEMPERATURE DOES NOT EXCEED 50°C. FOR TEMPERATURES ABOVE 50°C, MATERIALS SUCH AS NICKEL OR LINED STEEL MAY BE REQUIRED. STORE IN TIGHTLY SEALED CONTAINER AND PROTECT FROM MOISTURE AND FOREIGN MATERIALS. STORE IN DRY WELL-VENTILATED AREA. STORE AWAY FROM INCOMPATIBLE MATERIALS
SPECIAL SHIPPING INSTRUCTIONS	SEE SECTION 1 TDG CLASSIFICATION

SECTION 8: FIRST AID MEASURES

INSTRUCTIONS:

EYES: IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR A MINIMUM OF 30 MINUTES. HOLD EYELIDS OPEN DURING

PRODUCT: POTASSIUM HYDROXIDE SOLUTION (CAUSTIC POTASH)

FLUSHING. DO NOT TRANSPORT VICTIM UNTIL THE RECOMMENDED FLUSHING PERIOD IS COMPLETED UNLESS FLUSHING CAN BE CONTINUED DURING TRANSPORT.

SKIN: FLUSH SKIN WITH RUNNING WATER FOR A MINIMUM OF 30 MINUTES. IF IRRITATION PERSISTS, REPEAT FLUSHING. OBTAIN MEDICAL ATTENTION IMMEDIATELY. DO NOT TRANSPORT VICTIM UNLESS THE RECOMMENDED FLUSHING PERIOD IS COMPLETED OR FLUSHING CAN BE CONTINUED DURING TRANSPORT.

INGESTION: IF VICTIM IS ALERT AND NOT CONVULSING, RINSE OUT MOUTH AND GIVE ½ TO 1 GLASS OF WATER TO DILUTE MATERIAL. DO NOT INDUCE VOMITING. IF SPONTANEOUS VOMITING OCCURS, HAVE VICTIM LEAN FORWARD WITH HEAD DOWN TO AVOID BREATHING IN OF VOMITUS, RINSE MOUTH AND ADMINISTER MORE WATER. IMMEDIATELY TRANSPORT VICTIM TO EMERGENCY FACILITY.

INHALATION: MOVE VICTIM TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. KEEP PATIENT WARM AND AT REST. OBTAIN MEDICAL ATTENTION IMMEDIATELY.

NOTES TO PHYSICIAN: POTASSIUM HYDROXIDE EYE BURNS OFTEN GO THROUGH THREE STAGES - AN ACUTE STAGE WHEN EARLY DAMAGE IS EXPERIENCED, A REPARATION STAGE WHEN EYE BEGINS TO HEAL, AND A STAGE OF LATER COMPLICATIONS WHEN A RELAPSE MAY OCCUR WITH MORE SEVERE DAMAGE. FOLLOW UP CARE IS ESSENTIAL.

SECTION 9: PREPARATION INFORMATION

EMERGENCY PHONE NO	(613) 996 6666 (CANUTEC)
PREPARED BY	KENCRO CHEMICALS LIMITED (905) 827 4133
DATE	JUNE 2008

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LEGEND:

ACGIH	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
CAS #	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
KOH	POTASSIUM HYDROXIDE SOLUTION
LFL	LOWER FLAMMABLE LIMIT
MSHA	MINE SAFETY AND HEALTH ADMINISTRATION
N.AP	APPLICABLE
N. AV	NOT AVAILABLE
NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
TDG	TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS
TLV	THRESHOLD LIMIT VALUE
UFL	UPPER FLAMMABLE LIMIT
WHMIS	WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM