



MATERIAL SAFETY DATA SHEET

KEM CANADA MFG.
 4 BLAIR DRIVE
 BRAMPTON, ONTARIO
 L6T 2H5
 TEL# (905) 456-9444

EMERGENCY # CANUTEC (613) 996-6666
"USE IN CASE OF CHEMICAL EMERGENCY ONLY"

W.H.M.I.S. CLASSIFICATION: D1A, E

MATERIAL REFERENCE NO: 150700

SECTION I - MATERIAL IDENTIFICATION AND USE

MATERIAL NAME/I.D.: KEELHAUL	
CHEMICAL NAME: NOT APPLICABLE	CHEMICAL FAMILY: ACID BLEND
CHEMICAL FORMULA: MIXTURE	MOLECULAR WEIGHT: MIXTURE
SYNONYMS: NONE	
MATERIAL USE: ACID CLEANING COMPOUND	

SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

HAZARDOUS INGREDIENTS	APPROX. CONCENT.	TLV PPM	C.A.S. NUMBERS	LD 50 RAT, ORAL
HYDROCHLORIC ACID	10.0-30.0	5	7647-01-0	NO DATA
PHOSPHORIC ACID	1.0-5.0	1 MG/M3	7664-38-2	1530 MG/KG
ALCOHOL ETHOXYLATE	1.0-5.0	NO DATA	68131-39-5	4150 MG/KG

SECTION III - PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: LIQUID		
ODOUR AND APPEARANCE: CLEAR, BROWN LIQUID, CINNAMON ODOUR		
ODOUR THRESHOLD (PPM)	SPECIFIC GRAVITY	VAPOUR PRESSURE (MM)
NOT AVAILABLE	1.042	NOT ESTABLISHED
VAPOUR DENSITY (AIR=1)	EVAPORATION RATE	SOLUBILITY IN WATER
GREATER THAN 1	(WATER=1) 1	(20 ° C) COMPLETE
BOILING POINT (C)	FREEZING POINT (C)	% VOLATILE (BY WEIGHT)
100	NOT AVAILABLE	92
pH (1.0% SOLUTION)	DENSITY (G/ML)	COEF.OF WATER/OIL DISTR
1.8	NOT APPLICABLE	NOT AVAILABLE



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SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

| FLAMMABILITY: NON-FLAMMABLE |
IF YES, UNDER WHICH CONDITIONS:
MEANS OF EXTINCTION: AS APPROPRIATE FOR SURROUNDING MATERIALS.

| SPECIAL PROCEDURES: WEAR FULL PROTECTIVE GEAR INCLUDING SELF- |
| CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH |
| WATER. PROTECT AGAINST CORROSIVE LIQUIDS AND FUMES IF RELEASED. |
FLASH POINT (C) AND METHOD: NON-FLAMMABLE

| HAZARDOUS COMBUSTION PRODUCTS: MAY EVOLVE HYDROGEN CHLORIDE, |
| CHLORINE, CARBON DIOXIDE, CARBON MONOXIDE. AN INTENSE FIRE MAY GIVE |
SMALL AMOUNT OF PHOSPHORIC OXIDES.
UPPER EXPLOSION LIMIT
NOT APPLICABLE

EXPLOSION DATA SENSITIVITY	RATE OF BURNING	EXPLOSIVE POWER
TO CHEMICAL IMPACT		
NOT AVAILABLE	NOT APPLICABLE	NOT AVAILABLE

SENSITIVITY TO STATIC DISCHARGE: NOT AVAILABLE

SECTION V - REACTIVITY DATA

| CHEMICAL STABILITY: STABLE |
| IF NO, UNDER WHICH CONDITIONS: |
HAZARDOUS POLYMERIZATION WILL NOT OCCUR.
INCOMPATIBILITY TO OTHER SUBSTANCES: YES
IF SO, WHICH ONES: STRONG OXIDIZERS, MINERAL ACIDS, STRONG BASES,
AMINES, CARBONATES, CYANIDES, SUPHIDES, SULPHITES, FORMALDEHYDE,
REDUCING AGENTS, MOST METALS.

| REACTIVITY AND UNDER WHAT CONDITIONS: CONTACT WITH SOME METALS MAY |
| GENERATE FLAMMABLE HYDROGEN GAS WHICH MAY BE A LATENT EXPLOSION OR |
FIRE HAZARD. REACTS WITH ALKALIES TO LIBERATE HEAT.
HAZARDOUS DECOMPOSITION PRODUCTS: MAY EVOLVE HYDROGEN CHLORIDE GAS
AND CHLORINE AT HIGH TEMPERATURES.

SECTION VI - HEALTH HAZARD DATA

ROUTE OF ENTRY:
SKIN CONTACT: YES
INHALATION: YES



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|EFFECTS OF ACUTE EXPOSURE TO MATERIAL: |
|EYE CONTACT-EXTREMELY CORROSIVE. VAPOURS CAN CAUSE IRRITATION. |
|CONTACT WITH LIQUID CAN CAUSE SEVERE IRRITATION, BURNS AND PERMANENT |
|BLINDNESS. |
|SKIN CONTACT-CORROSIVE. CAN CAUSE SEVERE IRRITATION, BURNS, |
|PERMANENT SCARRING. REPEATED EXPOSURES TO VAPOURS MAY CAUSE REDNESS, |
|IRRITATION AND BURNS. |
|INHALATION-CAN CAUSE IRRITATION OF RESPIRATORY TRACT, CHEST PAIN |
|COUGHING. MAY CAUSE ULCERATION OF NOSE AND THROAT. VAPOURS MAY CAUSE |
|PULMONARY OEDEMA. SYMPTOMS MAY BE DELAYED. |
|INGESTION-CORROSIVE. CAN CAUSE SEVERE BURNING AND PAIN IN MOUTH, |
|THROAT AND ABDOMEN; VOMITING, DIARRHEA, PERFORATION OF ESOPHAGUS AND |
|STOMACH LINING. |

|EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: |
|INHALATION-REPEATED OR PROLONGED EXPOSURE MAY CAUSE BRONCHOPNEUMONIA |
|PILMONARY OEDEMA (FLUID BUILD-UP IN LUNGS). |

|LD 50 OF MATL. |LC 50 OF MATL. |EXPOSURE LIMIT(S) |IRRITANCY OF MATL |
| NOT AVAILABLE | NOT AVAILABLE | NOT AVAILABLE | CORROSIVE |

|SENSITIZATION OF MATERIAL | SYNERGISTIC MATERIALS |
| NOT AVAILABLE | NOT AVAILABLE |

|CARCINOGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY, MUTAGENICITY |
|NO DATA AVAILABLE. |

SECTION VII - PREVENTIVE MEASURES

|PERSONAL PROTECTIVE EQUIPMENT: |

| GLOVES: NEOPRENE, NATURAL RUBBER, BUTYL RUBBER, NITRILE RUBBER |
|RESPIRATORY: NIOSH/MSHA APPROVED RESPIRATOR WITH ACID GAS CARTIDGES |
| IF AIRBORNE CONCENTRATIONS EXCEED OCCUPATIONAL |
| EXPOSURE LIMITS. |
| EYE: CHEMICAL GOGGLES AND FACE SHIELD |
| FOOTWEAR: IMPERMEABLE |
| CLOTHING: IMPERMEABLE. |
| OTHER: EYE WASH AND SAFETY SHOWER. |
|ENGINEERING CONTROLS (EG VENTILATION, ENCLOSED PROCESS): ADEQUATE |
|LOCAL EXHAUST VENTILATION TO MAINTAIN EXPOSURES WITHIN ACCEPTABLE |
|LIMITS. |

|LEAK AND SPILL PROCEDURE: WEAR RECOMMENDED PROTECTIVE EQUIPMENT. |
|CONTAIN SPILL. TRANSFER TO SUITABLE CONTAINER FOR RECLAIM OR |
|DISPOSAL. NEUTRALIZE RESIDUE WITH SODA ASH OR SODIUM CARBONATE. |
|ABSORB ONTO INERT ABSORBANT AND SCOOP INTO CONTAINER FOR DISPOSAL. |
|FLUSH AREA WITH VOLUMES OF WATER. |

|WASTE DISPOSAL: DISPOSE ACCORDING TO LOCAL, PROVINCIAL AND FEDERAL |
|REGULATIONS. |



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SECTION VIII - FIRST AID MEASURES

| PROCEDURES: |
| EYES-HOLD EYELIDS OPEN AND IMMEDIATELY FLUSH WITH RUNNING WATER FOR |
| AT LEAST 30 MINUTES. GET IMMEDIATE MEDICAL ATTENTION AFTER FLUSHING. |
| SKIN-REMOVE CONTAMINATED CLOTHING IMMEDIATELY AND FLUSH WITH CLEAN |
| WATER FOR AT LEAST 30 MINUTES. GET PROMPT MEDICAL ATTENTION. |
| INHALATION-REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL |
| RESPIRATION. GIVE OXYGEN IF BREATHING IS DIFFICULT. GET IMMEDIATE |
| MEDICAL ATTENTION. |
| INGESTION-DO NOT INDUCE VOMITING. RINSE MOUTH WITH WATER. RINSE |
| MOUTH WITH WATER. DO NOT GIVE FLUIDS IF PERSON IS UNCONSCIOUS OR |
CONVULSING. GET IMMEDIATE MEDICAL ATTENTION.

SOURCES USED: RAW MATERIAL SUPPLIER'S MATERIAL SAFETY DATA SHEETS.

ADDITIONAL INFORMATION: NONE

SECTION IX - TDG SHIPPING INFORMATION

SHIPPING NAME	CLASS	UN NO.	PACKING GROUP
CORROSIVE LIQUIDS N.O.S.	8	1760	II
(HYDROCHLORIC ACID)			

| HANDLING PROCEDURES AND EQUIPMENT: PROTECT AGAINST CONTACT WITH EYES |
| SKIN OR CLOTHING. HANDLE AND USE IN WELL-VENTILATED AREAS. WASH |
THOROUGHLY AFTER HANDLING.

| STORAGE REQUIREMENTS: STORE IN ORIGINAL CONTAINER AWAY FROM |
| INCOMPATIBLE MATERIALS, DIRECT SUNLIGHT OR SOURCES OF HEAT. KEEP |
CONTAINER CLOSED WHEN NOT IN USE.

SPECIAL SHIPPING INFORMATION: NON-HEATED

SECTION X - HMIS HAZARD RATING INFORMATION

| FLAMMABILITY | REACTIVITY | HEALTH |
| 0 | 2 | 3 |

SECTION XI - PREPARATION DATE OF MSDS

| PREPARED BY: TECHNICAL DEPARTMENT TELEPHONE # (905) 456-9444 |
REVIEWED: OCTOBER 4, 2009

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