



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:
B2, D1B, D2A, E

MATERIAL REFERENCE NO: 5878600

SECTION I - MATERIAL IDENTIFICATION AND USE

| | |
|-------------------------------------|----------------------------------|
| MATERIAL NAME/I.D.: KEMTREET RT 786 | |
| CHEMICAL NAME : NOT APPLICABLE | CHEMICAL FAMILY : ALKALINE BLEND |
| CHEMICAL FORMULA: MIXTURE | MOLECULAR WEIGHT: NOT APPLICABLE |
| SYNONYMS: NONE | |
| MATERIAL USE: RETURN LINE TREATMENT | |

SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

| HAZARDOUS INGREDIENTS | APPROX. % CONCENT. | TLV PPM | C.A.S. N.A. U.N. NUMBERS | LD 50 ORAL, RAT |
|----------------------------|-------------------------|--------------|-------------------------------|----------------------|
| MORPHOLINE | 5.0-15.0 | 20 | 110-91-8 | 1450 MG/KG |
| CYCLOHEXYLAMINE | 10.0-30.0 | 10 | 108-91-8 | 156 MG/KG |
| | | | | |
| | | | | |
| | | | | |

SECTION III - PHYSICAL DATA FOR MATERIAL

| | | |
|---|---------------------------------------|--|
| PHYSICAL STATE: LIQUID | | |
| ODOUR AND APPEARANCE: CLEAR, AMBER LIQUID; AMINE ODOUR. | | |
| ODOUR THRESHOLD (PPM) 0.1 | SPECIFIC GRAVITY 0.935 | VAPOUR PRESSURE (MM) NOT AVAILABLE |
| VAPOUR DENSITY (AIR=1) NOT ESTABLISHED | EVAPORATION RATE NOT ESTABLISHED | SOLUBILITY IN WATER (20°C) COMPLETE |
| BOILING POINT (C) 100 (EST.) | FREEZING POINT (C) NOT AVAILABLE | % VOLATILE (BY WEIGHT) 100 |
| pH (10% SOLUTION) 10.5-11.5 | DENSITY (G/ML) NOT APPLICABLE | COEF.OF WATER/OIL DISTR NOT AVAILABLE |



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SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

| | | | |
|---|--|--|--|
| FLAMMABILITY: FLAMMABLE | | | |
| IF YES, UNDER WHICH CONDITIONS: VAPOURS MAY BE FLAMMABLE. | | | |
| MEANS OF EXTINCTION: ALCOHOL FOAM, CO2, WATER FOG. | | | |
| SPECIAL PROCEDURES: WEAR FULL PROTECTIVE GEAR INCLUDING SELF- | | | |
| CONTAINED BREATHING APPARATUS. VAPOURS ARE HEAVIER THAN AIR AND MAY | | | |
| TRAVEL TO IGNITION SOURCE AND FLASH BACK. | | | |
| FLASH POINT (C) AND METHOD: MINIMUM 31.7 (C) | | | |
| HAZARDOUS COMBUSTION PRODUCTS: MAY EVOLVE NITROGEN OXIDES, SMOKE, | | | |
| SOOT, CARBON DIOXIDE, CARBON MONOXIDE, AMMONIA, FORMALDEHYDE, | | | |
| ACETALDEHYDE. | | | |
| UPPER EXPLOSION LIMIT LOWER EXPLOSION LIMIT AUTOIGNITION TEMP (C) | | | |
| NOT AVAILABLE NOT AVAILABLE NOT AVAILABLE | | | |
| EXPLOSION DATA SENSITIVITY RATE OF BURNING EXPLOSIVE POWER | | | |
| TO CHEMICAL IMPACT | | | |
| NOT AVAILABLE NOT AVAILABLE NOT AVAILABLE | | | |
| SENSITIVITY TO STATIC DISCHARGE: NOT AVAILABLE | | | |

SECTION V - REACTIVITY DATA

| | | | |
|--|--|--|--|
| CHEMICAL STABILITY: STABLE | | | |
| IF NO, UNDER WHICH CONDITIONS: | | | |
| INCOMPATIBILITY TO OTHER SUBSTANCES: YES | | | |
| IF SO, WHICH ONES: AVOID CONTACT WITH STRONG ACIDS, OXIDIZING AGENTS | | | |
| REACTIVE METALS, NITRITES AND HALOGEN COMPOUNDS. | | | |
| REACTIVITY AND UNDER WHAT CONDITIONS: NO | | | |
| HAZARDOUS POLYMERIZATION WILL NOT OCCUR. | | | |
| | | | |
| HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION MAY EVOLVE | | | |
| NITROUS OXIDES, CARBON MONOXIDE, CARBON DIOXIDE, AMMONIA, | | | |
| FORMALDEHYDE, ACETALDEHYDES. | | | |

SECTION VI - HEALTH HAZARD DATA

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| ROUTE OF ENTRY: | | | |
| SKIN CONTACT: YES SKIN ABSORPTION: YES EYE CONTACT: YES | | | |
| INHALATION: YES INGESTION: YES | | | |



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| EFFECTS OF ACUTE EXPOSURE TO MATERIAL: |
| EYES-MAY CAUSE SEVERE IRRITATION, INTENSE WATERING. PROLONGED |
| CONTACT MAY CAUSE PERMANENT EYE INJURY. |
| SKIN-MAY CAUSE IRRITATION, INFLAMMATION, POSSIBLE BURNS. |
| INHALATION-MAY CAUSE IRRITATION OF NOSE, EYES AND THROAT, COUGHING, |
| DIFFICULTY IN BREATHING. EXCESSIVE INHALATION MAY CAUSE |
| BRONCHITIS, PULMONARY EDEMA AND CHEMICAL PNEUMONITIS. |
| INGESTION-MAY CAUSE IRRITATION AND BURNING SENSATION OF LIPS, MOUTH |
| AND THROAT, PAIN IN SWALLOWING, GASTRO-INTESTINAL IRRITATION, |
| ABDOMINAL PAIN, NAUSEA AND VOMITING. |

| EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: CAN CAUSE KIDNEY AND/OR |
| LIVER DAMAGE. |

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

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

| CARCINOGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY, MUTAGENICITY |
| REPRODUCTIVE EFFECTS-CYCLOHEXYLAMINE CAUSES PATERNAL EFFECTS IN |
| ANIMAL STUDIES AT MODERATE TO HIGH DOSAGES. |
| MUTAGENICITY-CYCLOHEXYLAMINE CAUSES SOME CHROMOSOMAL ABBERATIONS IN |
| ANIMALS. SEVERAL OTHER INVESTIGATIONS HAVE NEGATIVE RESULTS. |
| TERATOGENICITY-CYCLOHEXYLAMINE CAUSES POST-IMPLANT MORTALITY IN |
| ANIMALS FROM DOSAGES NEAR THE LC50. |
| MORPHOLINE MAY REACT WITH NITRITES TO FORM N-NITROSAMINES (KNOWN |
| CARCINOGENS) |

SECTION VII - PREVENTIVE MEASURES

| PERSONAL PROTECTIVE EQUIPMENT: |

| GLOVES: BUTYL RUBBER |
| RESPIRATORY: NIOSH APPROVED FOR ORGANIC VAPOURS |
| EYE: FACE SHIELD OR SAFETY GOGGLES |
| CLOTHING: LONG SLEEVED SHIRTS, TROUSERS, BUTYL RUBBER BOOTS AND |
| APRON. |
| OTHER: EYE WASH AND SAFETY SHOWER |
| ENGINEERING CONTROLS (EG VENTILATION, ENCLOSED PROCESS): MECHANICAL |
| RECOMMENDED TO MAINTAIN CONCENTRATION BELOW TLV. |

| LEAK AND SPILL PROCEDURE: WEAR RECOMMENDED PERSONAL PROTECTIVE |
| EQUIPMENT. STOP LEAKS AND CONTAIN SPILL. RECLAIM IF POSSIBLE. |
| SMALL SPILLS-WIPE UP OR MOP UP AND PLACE IN DISPOSAL CONTAINER. |
| LARGE SPILLS-ABSORB ONTO NON-COMBUSTIBLE ABSORBENT AND PLACE IN |
| APPROVED CONTAINER FOR DISPOSAL. DO NOT ALLOW LIQUID TO FLOW INTO |
| WATERWAYS. PRODUCT IS EXPECTED TO BE TOXIC TO AQUATIC LIFE. |

| WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, PROVINCIAL AND |
| FEDERAL REGULATIONS. |



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SECTION VIII - FIRST AID MEASURES

| PROCEDURES: EYES-IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR 15 |
| MINUTES. IF PAIN OR IRRITATION PERSIST, SEEK MEDICAL ASSISTANCE. |
| SKIN-REMOVE CONTAMINATED CLOTHING AND FLUSH AFFECTED AREA WITH |
| WATER FOR 15 MINUTES. IF PAIN OR IRRITATION PERSIST, SEEK MEDICAL |
| ASSISTANCE. LAUNDRY CLOTHING BEFORE REUSE. |
| INHALATION-MOVE VICTIM TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE |
| OXYGEN. GET MEDICAL ATTENTION. |
| INGESTION, IF SWALLOWED-DO NOT INDUCE VOMITING. GIVE WATER OR MILK. |
| IF VOMITING OCCURS, GIVE FLUIDS AGAIN. 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. | PG |
|-------------------------------------|-------|--------|----|
| CORROSIVE LIQUID, FLAMMABLE, N.O.S. | 8(3) | 2920 | II |
| (CYCLOHEXYLAMINE, MORPHOLINE) | | | |

| HANDLING PROCEDURES AND EQUIPMENT: HANDLE AND USE IN WELL VENTILATED |
| AREAS. AVOID CONTACT WITH EYES AND SKIN. WASH THOROUGHLY AFTER |
| HANDLING. |

| STORAGE REQUIREMENTS: STORE IN A COOL, DRY WELL VENTILATED AREA IN |
| ORIGINAL CONTAINER, AWAY FROM INCOMPATIBLE MATERIALS. KEEP CONTAINER |
| CLOSED WHEN NOT IN USE. |

| SPECIAL SHIPPING INFORMATION: NONE |

SECTION X - HMIS HAZARD RATING INFORMATION

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

SECTION XI - PREPARATION DATE OF MSDS

| PREPARED BY: TECHNICAL DEPARTMENT TELEPHONE # (905) 456-9444 |
| REVIEWED: OCTOBER 10, 2009 |

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