



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:
B3, D1B, E

MATERIAL REFERENCE NO: 745000

SECTION I - MATERIAL IDENTIFICATION AND USE

| | |
|---|----------------------------------|
| MATERIAL NAME/I.D.: KEMTREET 450 | |
| CHEMICAL NAME: NOT APPLICABLE | CHEMICAL FAMILY: AMINE MIXTURE |
| CHEMICAL FORMULA: MIXTURE | MOLECULAR WEIGHT: NOT APPLICABLE |
| SYNONYMS: NONE | |
| MATERIAL USE: STEAM LINE ANTI-CORROSION TREATMENT | |

SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

| HAZARDOUS INGREDIENTS | APPROX. % CONCENT. | TWA PPM | C.A.S. NUMBERS | LD 50 ORAL, RAT |
|--------------------------|-----------------------|------------|-------------------|--------------------|
| CYCLOHEXYLAMINE | 5.0-10.0 | 10 | 108-91-8 | 11 MG/KG |
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SECTION III - PHYSICAL DATA FOR MATERIAL

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|---|-------------------------------------|--|
| PHYSICAL STATE: LIQUID | | |
| ODOUR AND APPEARANCE: CLEAR, AMBER LIQUID; AMINE ODOUR. | | |
| ODOUR THRESHOLD (PPM) NOT AVAILABLE | SPECIFIC GRAVITY 0.994 | VAPOUR PRESSURE (MM) NOT AVAILABLE |
| VAPOUR DENSITY (AIR=1) NOT AVAILABLE | EVAPORATION RATE NOT ESTABLISHED | SOLUBILITY IN WATER (20°C) SOLUBLE |
| BOILING POINT (C) 93.3 | FREEZING POINT (C) NOT AVAILABLE | % VOLATILE (BY WEIGHT) 99 |
| pH (10% SOLUTION) 11.2-11.8 | 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: COMBUSTIBLE | IF YES, UNDER WHICH CONDITIONS: HIGH TEMPERATURES, DIRECT IGNITION | SOURCES |
| MEANS OF EXTINCTION: DRY CHEMICALS, ALCOHOL FOAM, CARBON DIOXIDE, | | 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: 60 (TCC) | | |
| HAZARDOUS COMBUSTION PRODUCTS: MAY EVOLVE NITROGEN OXIDES, CARBON | | DIOXIDE, CARBON MONOXIDE, AMMONIA, CYANIDES, TOXIC FUMES, |
| | | HYDROCARBONS. |
| 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: STRONG ACIDS, OXIDIZING AGENTS, REDUCING AGENTS, | |
| COPPER, ZINC, ALUMINUM, NITROGEN COMPOUNDS. | |
| REACTIVITY AND UNDER WHAT CONDITIONS: NO DATA | |
| HAZARDOUS POLYMERIZATION WILL NOT OCCUR. | |
| HAZARDOUS DECOMPOSITION PRODUCTS: NITROGEN OXIDES, CARBON DIOXIDE, | |
| CARBON MONOXIDE, AMMONIA, CYANIDES. | |

SECTION VI - HEALTH HAZARD DATA

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



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|EFFECTS OF ACUTE EXPOSURE TO MATERIAL:
|EYES-CORROSIVE. CONTACT MAY CAUSE EYE DAMAGE AND BLINDNESS,
|TRANSIENT VISUAL DISTURBANCES, STINGING, BURNING, INTENSE WATERING,
|MAY PRODUCE CORNEAL EDEMA.
|SKIN-CORROSIVE. CONTACT MAY CAUSE CHEMICAL BURNS, REDNESS, SWELLING,
|ITCHING, TINGLING, INFLAMMATION.
|INHALATION-OF MIST MAY CAUSE MODERATE IRRITATION OF RESPIRATORY
|TRACT, COUGHING, SHORTNESS OF BREATH, CHEST PAIN.
|INGESTION-MAY CAUSE SEVERE IRRITATION OR BURNS TO MOUTH, THROAT,
|ESOPHAGUS AND STOMACH, NAUSEA, VOMITING, DIARRHEA.

|EFFECTS OF CHRONIC EXPOSURE TO MATERIAL:
|PROLONGED OR REPEATED OVEREXPOSURES MAY RESULT IN ABSORPTION OF
|POTENTIALLY HARMFUL AMOUNTS OF MATERIAL.
|
|

|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-CYLCOHEXYLAMINE MAY CAUSE ADVERSE REPRODUCTIVE
|EFFECTS BASED ON ANIMAL DATA.
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SECTION VII - PREVENTIVE MEASURES

|PERSONAL PROTECTIVE EQUIPMENT:
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| GLOVES: RUBBER OR VINYL
| RESPIRATORY: NIOSH APPROVED RESPIRATOR FOR VAPOURS.
| EYE: FACE SHIELD OR SAFETY GOGGLES
| CLOTHING: IMPERMEABLE
| OTHER: EYE WASH AND SAFETY SHOWER
| ENGINEERING CONTROLS (EG VENTILATION, ENCLOSED PROCESS): LOCAL
| EXHAUST AS NECESSARY TO MAINTAIN EXPOSURES WITHIN ACCEPTABLE LIMITS.

|LEAK AND SPILL PROCEDURE: WEAR RECOMMENDED PROTECTIVE EQUIPMENT.
|CONTAIN SPILL. PROVIDE VENTILATION. REMOVE IGNITION SOURCES. TRANSFER
|MATERIAL TO SUITABLE CONTAINER FOR RECLAM OR DISPOSAL. ABSORB
|REMAINING MATERIAL ONTO INERT ABSORBANT AND SCOOP INTO DISPOSAL
|CONTAINER.

|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 AT |
|LEAST 15 MINUTES. GET IMMEDIATE MEDICAL ASSISTANCE.
|SKIN-REMOVE CONTAMINATED CLOTHING AND FLUSH AFFECTED AREA WITH |
|WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION. LAUNDER |
|CLOTHING BEFORE REUSE.
|INHALATION-MOVE VICTIM TO FRESH AIR. IF NOT BREATHING, GIVE |
|ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT GET IMMEDIATE |
|MEDICAL ATTENTION.
|INGESTION-DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN |
|UNCONSCIOUS OR CONVULSING PERSON. 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. (CYCLOHEXYLAMINE) | 8(3) | 2920 | II |

|HANDLING PROCEDURES AND EQUIPMENT: AVOID CONTACT WITH EYES, SKIN AND |
|CLOTHING. USE ONLY IN ADEQUATELY VENTILATED AREAS. DO NOT USE NEAR |
|IGNITION SOURCES. WASH THOROUGHLY AFTER HANDLING.
|

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

|SPECIAL SHIPPING INFORMATION: NONE |

SECTION X - HMIS HAZARD RATING INFORMATION

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

SECTION XI - PREPARATION DATE OF MSDS

|PREPARED BY: TECHNICAL DEPARTMENT TELEPHONE # (905) 456-9444 |
|REVISED: OCTOBER 10, 2009 REPLACES: FEBRUARY 10, 2006 |

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