



# 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, D2A, E

MATERIAL REFERENCE NO: 577400

## SECTION I - MATERIAL IDENTIFICATION AND USE

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MATERIAL NAME/I.D.: KEMTREET RT # 774
CHEMICAL NAME: NOT APPLICABLE
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 | CHEMICAL FORMULA: MIXTURE | MOLECULAR WEIGHT: NOT APPLICABLE |  
 -----  
SYNONYMS: BLENDED NEUTRALIZING AMINE
MATERIAL USE: CORROSION CONTROL - STEAM BOILERS
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## SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

HAZARDOUS INGREDIENTS	APPROX. % CONCENT.	TWA PPM	C.A.S. NUMBERS	LD 50 ORAL, RAT
CYCLOHEXYLAMINE	10.0-30.0	10	108-91-8	11 MG/KG
MORPHOLINE	10.0-30.0	20	110-91-8	1050 MG/KG

## SECTION III - PHYSICAL DATA FOR MATERIAL

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PHYSICAL STATE: LIQUID
ODOUR AND APPEARANCE: CLEAR, AMBER LIQUID; AMINE ODOUR.
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 | ODOUR THRESHOLD (PPM) | SPECIFIC GRAVITY | VAPOUR PRESSURE (MM) |  
 | NOT AVAILABLE | 0.990 | NOT AVAILABLE |  
 -----  
 | VAPOUR DENSITY (AIR=1) | EVAPORATION RATE | SOLUBILITY IN WATER |  
 | NOT AVAILABLE | NOT ESTABLISHED | (20øC) SOLUBLE |  
 -----  
 | BOILING POINT (C) | FREEZING POINT (C) | % VOLATILE (BY WEIGHT) |  
 | NOT AVAILABLE | NOT AVAILABLE | >80 |  
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 | pH (10% SOLUTION) | DENSITY (G/ML) | COEF.OF WATER/OIL DISTR |  
 | 11.0-12.0 | NOT APPLICABLE | NOT AVAILABLE |  
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## SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

| FLAMMABILITY: FLAMMABLE |  
| 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: 46.1 (TCC) |

| HAZARDOUS COMBUSTION PRODUCTS: OXIDES OF CARBON AND NITROGEN, |  
| AMMONIA, CYANIDES, ALDEHYDES, KETONES, NITROGEN COMPOUNDS, |  
| HYDROCARBONS, TOXIC FUMES, |

UPPER EXPLOSION LIMIT	LOWER EXPLOSION LIMIT	AUTOIGNITION TEMP(C)
NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE

EXPLOSION DATA SENSITIVITY TO CHEMICAL IMPACT	RATE OF BURNING	EXPLOSIVE POWER
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 |  
| REDUCING AGENTS, ALUMINUM, ZINC, COPPER AND NITRITES. |

| REACTIVITY AND UNDER WHAT CONDITIONS: WHEN MORPHOLINE IS MIXED WITH |  
| NITRITES OR NITROSATING AGENTS, CARINOGENIC NITROSAMINES MAY BE |  
| FORMED. |  
| HAZARDOUS POLYMERIZATION WILL NOT OCCUR. |

| HAZARDOUS DECOMPOSITION PRODUCTS: NITROGEN COMPOUNDS, CARBON DIOXIDE |  
| CARBON MONOXIDE, CYANIDES, AMMONIA, OXIDES OF NITROGEN. |

## SECTION VI - HEALTH HAZARD DATA

| 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-CORROSIVE. CONTACT MAY CAUSE PERMANENT EYE DAMAGE AND BLINDNESS |  
|TRANSIENT VISUAL DISTURBANCES, STINGING, BURNING, INTENSE WATERING, |  
|CONJUNCTIVITIS. MAY PRODUCE CORNEAL EDEMA. |  
|SKIN-CORROSIVE. CONTACT MAY CAUSE CHEMICAL BURNS, REDNESS, SWELLING, |  
|ITCHING, TINGLING, INFLAMMATION. |  
|INHALATION-OF MIST MAY CAUSE SEVERE IRRITATION AND POSSIBLE BURNS 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, DIZZINESS, |  
|DROWZINESS, CIRCULATORY COLLAPSE. |

|EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: |  
|SKIN-MAY CAUSE ALERGIG SKIN REACTION. |  
|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. |  
|MORPHOLINE MAY REACT WITH NITRITES TO FORM N-NITROSAMINES (KNOWN |  
| CARCINOGENS) |

## SECTION VII - PREVENTIVE MEASURES

|PERSONAL PROTECTIVE EQUIPMENT: |

| GLOVES: CHEMICAL RESISTANT (i.e. RUBBER OR VINYL) |  
|RESPIRATORY: NIOSH APPROVED RESPIRATOR IF EXPOSURES EXCEED |  
| OCCUPATIONAL EXPOSURE LIMITS. |  
| EYE: SAFETY GOGGLES. FACE SHIELD IF SPLASHING HAZARD EXISTS |  
| CLOTHING: IMPERMEABLE |  
| OTHER: EYE WASH AND SAFETY SHOWER |  
|ENGINEERING CONTROLS (EG VENTILATION, ENCLOSED PROCESS): PROVIDE |  
|GENERAL AND/OR LOCAL EXHAUST VENTILATION AS NECESSARY TO MAINTAIN |  
|AIRBORNE CONCENTRATIONS WITHIN ACCEPTABLE LIMITS. |

|LEAK AND SPILL PROCEDURE: WEAR RECOMMENDED PROTECTIVE EQUIPMENT. |  
|CONTAIN SPILL. PROVIDE VENTILATION. REMOVE IGNITION SOURCES. TRANSFER |  
|MATERIAL TO SUITABLE CONTAINER FOR RECLAIM 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

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| 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 BREATHING IS DIFFICULT, GIVE |

| OXYGEN. GET MEDICAL ATTENTION. |

| INGESTION, IF SWALLOWED-DO NOT INDUCE VOMITING. SLOWLY GIVE 1-2 |

| GLASSES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR |

| CONVULSING PERSON. GET IMMEDIATE MEDICAL ATTENTION. |

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

| ADDITIONAL INFORMATION: NONE |

## SECTION IX - TDG SHIPPING INFORMATION

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SHIPPING NAME	CLASS	UN NO.	PACKING GROUP
CORROSIVE LIQUIDS, FLAMMABLE N.O.S. (MORPHOLINE)	8(3)	2920	I

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| 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

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FLAMMABILITY	REACTIVITY	HEALTH
2	0	3

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## SECTION XI - PREPARATION DATE OF MSDS

| PREPARED BY: TECHNICAL DEPARTMENT      TELEPHONE # (905) 456-9444 |

| REVISED: OCTOBER 10, 2009                      REPLACES: SEPTEMBER 18, 2005 |

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