



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: D2B, E

MATERIAL REFERENCE NO: 544900

SECTION I - MATERIAL IDENTIFICATION AND USE

| | |
|--------------------------------------|-----------------------------------|
| MATERIAL NAME/I.D.: KEMTREET SB 449 | |
| CHEMICAL NAME: NOT APPLICABLE | CHEMICAL FAMILY : BLENDED PRODUCT |
| CHEMICAL FORMULA: MIXTURE | MOLECULAR WEIGHT: NOT APPLICABLE |
| SYNONYMS: NONE | |
| MATERIAL USE: STEAM BOILER TREATMENT | |

SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

| HAZARDOUS INGREDIENTS | APPROX. % CONCENT. | TLV PPM | C.A.S. NUMBERS | LD 50 ORAL, RAT |
|-----------------------------------|-----------------------|------------------|-------------------|--------------------|
| SODIUM HYDROXIDE | 1.0-5.0 | 2 MG/M3 | 1310-73-2 | 140 MG/KG |
| 2-PROPENOIC ACID (SODIUM SALT) | 1.0-5.0 | NOT AVAILABLE | 9003-04-7 | NOT AVAILABLE |

SECTION III - PHYSICAL DATA FOR MATERIAL

| | | |
|---|---------------------------------------|--|
| PHYSICAL STATE: LIQUID | | |
| ODOUR AND APPEARANCE: CLEAR, AMBER COLOUR; ACRID ODOUR. | | |
| ODOUR THRESHOLD (PPM) NOT ESTABLISHED | SPECIFIC GRAVITY 1.023 | VAPOUR PRESSURE (MM) NOT ESTABLISHED |
| VAPOUR DENSITY (AIR=1) NOT ESTABLISHED | EVAPORATION RATE NOT AVAILABLE | SOLUBILITY IN WATER (20°C) COMPLETE |
| BOILING POINT (C) NOT AVAILABLE | FREEZING POINT (C) NOT AVAILABLE | % VOLATILE (BY VOLUME) >93 |
| pH (10.0 % SOLUTION) 12.0-13.0 | DENSITY (G/ML) NOT APPLICABLE | COEF.OF WATER/OIL DISTR NOT AVAILABLE |



MATERIAL SAFETY DATA SHEET

MATERIAL REFERENCE NO: 544900

SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

| | | |
|---|-----------------------|----------------------|
| FLAMMABILITY: NON-FLAMMABLE | | |
| IF YES, UNDER WHICH CONDITIONS: | | |
| | | |
| MEANS OF EXTINCTION: WATER FOG, CARBON DIOXIDE, DRY CHEMICAL | | |
| | | |
| SPECIAL PROCEDURES: AS APPROPRIATE FOR SURROUNDING MATERIALS. | | |
| | | |
| | | |
| FLASH POINT (C) AND METHOD: NONE | | |
| | | |
| HAZARDOUS COMBUSTION PRODUCTS: OXIDES OF CARBON AND NITROGEN, | | |
| AMMONIA | | |
| | | |
| UPPER EXPLOSION LIMIT | LOWER EXPLOSION LIMIT | AUTOIGNITION TEMP(C) |
| NOT APPLICABLE | NOT APPLICABLE | NOT AVAILABLE |
| | | |
| EXPLOSION DATA SENSITIVITY | RATE OF BURNING | EXPLOSIVE POWER |
| TO CHEMICAL IMPACT | | |
| NOT AVAILABLE | NOT APPLICABLE | NOT AVAILABLE |
| | | |
| SENSITIVITY TO STATIC DISCHARGE: NOT APPLICABLE | | |
| | | |

SECTION V - REACTIVITY DATA

| | | |
|--|--|--|
| CHEMICAL STABILITY: STABLE | | |
| IF NO, UNDER WHICH CONDITIONS: | | |
| | | |
| INCOMPATIBILITY TO OTHER SUBSTANCES: YES | | |
| IF SO, WHICH ONES: ACIDS, REACTIVE METALS, ORGANIC HALOGENS, ORGANIC | | |
| NITRO COMPOUNDS. | | |
| | | |
| REACTIVITY AND UNDER WHAT CONDITIONS: NOT ESTABLISHED | | |
| | | |
| | | |
| HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON AND NITROGEN, | | |
| AMMONIA. | | |
| | | |

SECTION VI - HEALTH HAZARD DATA

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



MATERIAL SAFETY DATA SHEET

MATERIAL REFERENCE NO: 544900

EFFECTS OF ACUTE EXPOSURE TO MATERIAL:
EYES-MAY CAUSE CORNEAL DAMAGE, POSSIBLE BURNS.
SKIN-MAY CAUSE IRRITATION, BURNING SENSATION.
INHALATION-MAY CAUSE IRRITATION OF MOUTH, THROAT AND LARYNX.
EXCESSIVE MIST INHALATION MAY CAUSE LUNG DAMAGE WHICH COULD
RESULT IN CHEMICAL PNEUMONIA.
INGESTION-OF LARGE AMOUNTS MAY RESULT IN GASTRO-INTESTINAL
IRRITATION OR ULCERATION, BURNS TO THE MOUTH AND THROAT.

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL:
MAY CAUSE DERMATITIS UPON FREQUENT OR PROLONGED CONTACT.

| | | | |
|----------------|----------------|-----------------|-------------------|
| LD 50 OF MATL. | LC 50 OF MATL. | EXPOSURE LIMITS | IRRITANCY OF MATL |
| NOT AVAILABLE | NOT AVAILABLE | NOT ESTABLISHED | MODERATE |

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

CARCINOGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY, MUTAGENICITY:
NONE KNOWN

SECTION VII - PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: GLOVES & GLASSES IF USING CONCENTRATE

GLOVES: RUBBER / VINYL / PVA
RESPIRATORY: AIR PURIFYING RESPIRATOR IF MISTY CONDITIONS PREVAIL.
EYE: SAFETY GOGGLES OR FACE SHIELD
FOOTWEAR: IMPERMEABLE
CLOTHING: IMPERMEABLE
OTHER: EYE WASH
ENGINEERING CONTROLS (EG VENTILATION, ENCLOSED PROCESS): GENERAL IS
NORMALLY SUFFICIENT.

LEAK AND SPILL PROCEDURE:
VENTILATE. SMALL SPILLS SHOULD BE FLUSHED WITH LARGE AMOUNTS OF
WATER. LARGE SPILLS SHOULD BE COLLECTED FOR RECLAIM OR DISPOSAL.
ABSORB REMAINING RESIDUAL ONTO INERT ABSORBANT AND SCOOP INTO
DISPOSAL CONTAINER.

WASTE DISPOSAL:
DISPOSE OF THROUGH A LICENSED DISPOSAL FACILITY IN ACCORDANCE WITH
LOCAL, PROVINCIAL AND FEDERAL REGULATIONS.



MATERIAL SAFETY DATA SHEET

MATERIAL REFERENCE NO: 544900

SECTION VIII - FIRST AID MEASURES

PROCEDURES: HAZARDOUS PRODUCT. OBTAIN MEDICAL ATTENTION FOR ALL EXPOSURES OTHER THAN MINOR INSTANCES OF INHALATION OR SKIN CONTACT. INHALATION: REMOVE TO FRESH AIR. GIVE OXYGEN IF BREATHING IS DIFFICULT. SEEK MEDICAL ATTENTION. EYE CONTACT: FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION. SKIN CONTACT: FLUSH THOROUGHLY WITH SOAP AND WATER. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. INGESTION: DO NOT INDUCE VOMITING. RINSE MOUTH WITH WATER. DRINK MILK OR WATER. DO NOT GIVE ANYTHING BY MOUTH IF VICTIM IS UNCONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY.

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. (SODIUM HYDROXIDE) | 8 | 1760 | III |

HANDLING PROCEDURES AND EQUIPMENT: AVOID CONTACT WITH SKIN AND EYES. WASH THOROUGHLY AFTER HANDLING.

STORAGE REQUIREMENTS:
STORE IN A COOL DRY PLACE. KEEP CONTAINERS CLOSED WHEN NOT IN USE.
KEEP FROM FREEZING.

SPECIAL SHIPPING INFORMATION: NONE

SECTION X - HAZARD RATING INFORMATION

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

SECTION XI - PREPARATION DATE OF MSDS

PREPARED BY: TECHNICAL DEPARTMENT TELEPHONE # (905) 456-9444
REVIEWED: NOVEMBER 23, 2002

DISCLAIMER:

THE INFORMATION CONTAINED HEREIN IS COMPILED FROM SOURCES BELIEVED TO BE RELIABLE. THE MANNER AND CONDITIONS OF USE AND HANDLING MAY INVOLVE OTHER AND ADDITIONAL CONSIDERATIONS. WE ACCEPT NO RESPONSIBILITY FOR THE ACCURACY, SUFFICIENCY, RELIABILITY OR FOR ANY LOSS OR INJURY RESULTING FROM THE USE OF THE INFORMATION.