

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: 781800

SECTION I - MATERIAL IDENTIFICATION AND USE

| | |
|---|----------------------------------|
| MATERIAL NAME/I.D.: KT 818 | |
| CHEMICAL NAME: MIXTURE | CHEMICAL FAMILY: ACIDIC BLEND |
| CHEMICAL FORMULA: MIXTURE | MOLECULAR WEIGHT: NOT APPLICABLE |
| SYNONYMS: NONE | |
| MATERIAL USE: LIQUID pH CONTROL & DE-SCALER | |

SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

| HAZARDOUS INGREDIENTS | APPROX. % CONCENT. | TLV PPM | C.A.S. NUMBERS | LD 50 ORAL, RAT |
|--------------------------|-----------------------|------------|-------------------|--------------------|
| SULPHAMIC ACID | 10.0-30.0 | 1 MG/M3 | 5329-14-6 | 1450 MG/KG |
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SECTION III - PHYSICAL DATA FOR MATERIAL

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| PHYSICAL STATE: LIQUID | | |
| ODOUR AND APPEARANCE: CLEAR, NEGLIGIBLE ODOUR. | | |
| ODOUR THRESHOLD (PPM) NOT AVAILABLE | SPECIFIC GRAVITY 1.08 | VAPOUR PRESSURE (MM) NOT AVAILABLE |
| VAPOUR DENSITY (AIR=1) >1 | EVAPORATION RATE NOR APPLICABLE | SOLUBILITY IN WATER (20°C) > COMPLETE |
| BOILING POINT (C) NOT APPLICABLE | FREEZING POINT (C) NOT AVAILABLE | % VOLATILE (BY WEIGHT) MORE THAN 70% |
| pH (100% SOLUTION) 1.0-2.0 | 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: NON-FLAMMABLE

|IF YES, UNDER WHICH CONDITIONS:

|MEANS OF EXTINCTION: WATER SPRAY, ALCOHOL FOAM, CARBON DIOXIDE, DRY |
|CHEMICAL.

|SPECIAL PROCEDURES: WEAR FULL PROTECTIVE GEAR INCLUDING SELF- |
|CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS.

|MAY EVOLVE SULFUR DIOXIDE VAPOURS AT HIGH TEMPERATURES.

|FLASH POINT (C) AND METHOD: NOT APPLICABLE

|HAZARDOUS COMBUSTION PRODUCTS: MAY EVOLVE SULFUR DIOXIDE, SULPHUR |
|OXIDE, AMMONIA, HAZARDOUS FUMES, NITROGEN.

|

|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 AVAILABLE

SECTION V - REACTIVITY DATA

|CHEMICAL STABILITY: NORMALLY STABLE

|IF NO, UNDER WHICH CONDITIONS: SULPHAMIC ACID SLOWLY HYDROLYZES IN |
|SOLUTION.

|INCOMPATIBILITY TO OTHER SUBSTANCES: YES

|IF SO, WHICH ONES: OXIDIZING AGENTS, STRONG ALKALIES, STRONG ACIDS, |
|CHLORINE, POTASSIUM CHLORATE, METAL SULPHIDES, NITRATES, NITRITES, |
|BROMINE. MAY CORRODE SUCH METALS AS LEAD AND ALUMINUM.

|REACTIVITY AND UNDER WHAT CONDITIONS: HEATING SULPHAMIC ACID WITH |
|SODIUM OR POTASSIUM NITRATES OR NITRITES CAN LEAD TO REACTIONS WHICH |
|MAY BE EXPLOSIVE.

|HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION MAY EVOLVE |
|SULFUR DIOXIDE, SULPHUR OXIDE, AMMONIA, HAZARDOUS FUMES, NITROGEN.

SECTION VI - HEALTH HAZARD DATA

|ROUTE OF ENTRY:

|SKIN CONTACT: YES SKIN ABSORPTION: NO EYE CONTACT: YES |
| INHALATION: YES INGESTION: YES |

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|EFFECTS OF ACUTE EXPOSURE TO MATERIAL:

|EYES-CORROSIVE. CAUSES BLURRED VISION, REDNESS, TEARING. CAN CAUSE
|SEVERE BURNS.

|SKIN-CORROSIVE. CONTACT MAY CAUSE REDNESS AND BLISTERING

|INHALATION-DESTRUCTIVE TO TISSUES OF MUCOUS MEMBRANES AND UPPER

|RESPIRATORY TRACT. SYMPTOMS MAY INCLUDE BURNING SENSATION, COUGHING,

|WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA,

|VOMITING.

|INGESTION-CORROSIVE. MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA,
|VOMITING, DIARRHEA.

|EFFECTS OF CHRONIC EXPOSURE TO MATERIAL:

|SKIN-MAY CAUSE DERMATITIS.

|INHALATION-REPEATED OR PROLONGED INHALATION OF HIGH CONCENTRATIONS
|OF VAPOURS MAY CAUSE ULCERATION AND PERFORATION OF NASAL SEPTUM,
|PULMONARY EDEMA.

|INGESTION-MAY CAUSE KIDNEY AND LIVER DAMAGE.

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

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

|CARCINOGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY, MUTAGENICITY:

| NONE

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SECTION VII - PREVENTIVE MEASURES

|PERSONAL PROTECTIVE EQUIPMENT:

| GLOVES: RUBBER OR VINYL

|RESPIRATORY: NIOSH APPROVED FOR ACID VAPOURS.

| EYE: FACE SHIELD AND SAFETY GOGGLES

| FOOTWEAR: IMPERVIOUS RECOMMENDED

| CLOTHING: SUFFICIENT TO PREVENT SKIN CONTACT

| OTHER: EYE WASH AND SAFETY SHOWER

|ENGINEERING CONTROLS (EG VENTILATION, ENCLOSED PROCESS): LOCAL AS

|NEEDED TO MAINTAIN EXPOSURES WITHIN ACCEPTABLE LIMITS.

|LEAK AND SPILL PROCEDURE: WEAR RECOMMENDED PROTECTIVE EQUIPMENT.

|CAREFULLY TRANSFER TO SUITABLE CONTAINER FOR REUSE OR DISPOSAL

|NEUTRALIZE RESIDUAL WITH LIME SLURRY, LIMESTONE OR SODA ASH. FLUSH

|WITH VOLUMES OF WATER.

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|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 20
|MINUTES WHILE HOLDING EYELIDS OPEN. OBTAIN IMMEDIATE MEDICAL
|ASSISTANCE.

|SKIN- REMOVE CONTAMINATED CLOTHING AND WASH AFFECTED AREA WITH SOAP
|AND WATER FOR AT LEAST 20 MINUTES. IF PAIN OR IRRITATION PERSIST,
|SEEK MEDICAL ASSISTANCE. LAUNDER CLOTHING BEFORE REUSE.

| INHALATION-MOVE VICTIM TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE
| OXYGEN. IF NOT BREATHING, ADMINISTER ARTIFICIAL RESPIRATION. GET
| MEDICAL ATTENTION.

| INGESTION-DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH IF
| VICTIM 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

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| SHIPPING NAME | CLASS | UN NO. | PACKING GROUP |
| CORROSIVE LIQUID, N.O.S. (SULPHAMIC ACID) | 8 | 1760 | II |

|HANDLING PROCEDURES AND EQUIPMENT: AVOID CONTACT WITH EYES, SKIN AND
|CLOTHING. AVOID CREATING AND BREATHING DUST. WASH THOROUGHLY AFTER
|HANDLING.

| STORAGE REQUIREMENTS: STORE IN TIGHTLY SEALED CONTAINERS IN A COOL,
| DRY AREA

| SPECIAL SHIPPING INFORMATION: NONE

SECTION X - HMIS HAZARD RATING INFORMATION

| FLAMMABILITY | REACTIVITY | HEALTH |
|--------------|------------|--------|
| 0 | 1 | 2 |

SECTION XI - PREPARATION DATE OF MSDS

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