



MATERIAL SAFETY DATA SHEET

PRS FIRE & CONTENT CLEANER

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER'S NAME : ROCHESTER MIDLAND LIMITED
 MANUFACTURERS ADDRESS : 851 PROGRESS COURT ,OAKVILLE, ONTARIO
 EMERGENCY PHONE NUMBER: CANUTEC (613) 996-6666
 SUPPLIER IDENTIFIER: NOT AVAILABLE
 SUPPLIER'S ADDRESS: NOT AVAILABLE
 SUPPLIER EMERGENCY PHONE NUMBER: NOT AVAILABLE
 PRODUCT NAME : PRS FIRE AND CONTENT CLEANER
 PRODUCT USE : HEAVY DUTY CLEANER WITH ADDED ENZYMES
 WHMIS CATEGORY: D2B, E
 PREPARED BY : ROCHESTER MIDLAND LIMITED.
 PHONE NUMBER OF PREPARER: (905) 847-3000
 DATE PREPARED: AUGUST 31, 2007

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS#	EXPOSURE LEVELS	LD (50), ROUTE, SPECIES	LC(50), ROUTE, SPECIES
MONOETHANOLAMINE	1-5	141-43-5	OSHA PEL TWA 3 ppm TWA 8 mg/ m ³ STEL 6ppm STEL 15 mg/ m ³ ACGIH STEL 6 ppm TLV-TWA 2 mg/ m ³	ORAL 1720 mg/ Kg (RAT) DERMAL 1000 mg/ Kg (RABBIT)	>2420 mg /m ³ 2 HOUR EXPOSURE (MOUSE)
POTASSIUM HYDROXIDE	1-5	1310-58-3	ACGIH TLV-TWA 2 mg/ m ³ OSHA PEL 2 mg/ m ³	ORAL 273 mg/ Kg (MALE RAT)	NOT AVAILABLE
SODIUM LAURYL SULFATE	1-5	151-21-3	NOT AVAILABLE	ORAL 1280 mg/ Kg (RAT) DERMAL 580 mg/ Kg (MALE RABBIT)	>3900 mg/ m ³ 1 HOUR EXPOSURE (RAT)
OLEIC ACID	1-5	112-80-1	NOT AVAILABLE	ORAL >19200 mg/ Kg (MALE RAT)	NOT AVAILABLE
OTHER INGREDIENTS	%	CAS#	EXPOSURE LEVELS	LD (50), ROUTE, SPECIES	LC(50), ROUTE, SPECIES
VIABLE BACTERIAL CULTURES	0.1-1	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE

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SECTION 04: FIRST AID MEASURES

POTENTIAL ACUTE HEALTH EFFECTS:

ROUTE OF ENTRY: EYES, SKIN, INHALATION, INGESTION

SKIN CONTACT: REPEATED OR PROLONGED CONTACT MAY CAUSE IRRITATION AND BURNS WHICH MAY NOT BE IMMEDIATELY PAINFUL OR VISIBLE. ORGANISMS USED ARE NON-PATHOGENIC BUT CAN CAUSE INFECTION WHEN IN CONTACT WITH OPEN WOUNDS OR BROKEN SKIN. THESE ORGANISMS ARE SUSCEPTIBLE TO MANY COMMONLY -USED ANTIBIOTICS. INDIVIDUALS WITH A HISTORY OF DERMAL ALLERGIC REACTION MAY EXPERIENCE SLIGHT REDNESS ON HANDS AND FOREARMS.

SKIN ABSORPTION : ABSORPTION OF MONOETHANOLAMINE COMPONENT MAY RESULT FROM PROLONGED OR WIDESPREAD SKIN CONTACT. NOT EXPECTED UNDER NORMAL USE CONDITIONS.

EYE: MAY CAUSE SEVERE IRRITATION AND BURNS; POSSIBLE PERMANENT TISSUE DAMAGE; EVEN BLINDNESS IF LEFT UNTREATED.

INHALATION: INHALATION OF CONCENTRATED SPRAY MIST MAY CAUSE IRRITATION AND BURNS OF RESPIRATORY TRACT. INDIVIDUALS SENSITIVE TO ENZYME PRODUCTS MAY DEVELOP ALLERGIC RESPIRATORY SYMPTOMS IF ENZYME MISTS ARE INHALED.

INGESTION: HARMFUL IF SWALLOWED. MAY CAUSE IRRITATION, BURNS, NAUSEA, VOMITING AND DIARRHEA. ASPIRATION OF VOMITED CONTENTS INTO LUNGS MAY CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

ACUTE OVER-EXPOSURE
EFFECTS: AS ABOVE.

CHRONIC OVER EXPOSURE
EFFECTS: REPEATED OVEREXPOSURE MAY CAUSE DERMATITIS. REPEATED OVEREXPOSURE TO MONOETHANOLAMINE COMPONENT MAY CAUSE LIVER AND KIDNEY EFFECTS.

SECTION 03: HAZARDS IDENTIFICATION

EYES: FLUSH EYES WITH ABUNDANT WATER FOR AT LEAST 20 MINUTES WHILE HOLDING EYELIDS OPEN TO ENSURE COMPLETE IRRIGATION OF THE ENTIRE EYE CAVITY. **GET IMMEDIATE MEDICAL ATTENTION.**

SKIN: WASH SKIN WITH WATER FOR AT LEAST 20 MINUTES. REMOVE CONTAMINATED CLOTHING. GET MEDICAL ATTENTION.

INHALATION: REMOVE VICTIM TO FRESH AIR. ASSIST BREATHING AS NEEDED. GET MEDICAL ATTENTION.

INGESTION: **DO NOT INDUCE VOMITING.** IF VICTIM CONSCIOUS, GIVE 1 - 2 GLASSES OF WATER TO DILUTE STOMACH CONTENTS. **GET IMMEDIATE MEDICAL ATTENTION.** NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

SECTION 05: FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD OF DETERMINATION: NONE. TCC

UPPER EXPLOSION LIMIT (% BY VOLUME): NOT APPLICABLE

LOWER EXPLOSION LIMIT (% BY VOLUME): NOT APPLICABLE

AUTO-IGNITION TEMPERATURE: NOT AVAILABLE

FLAMMABILITY CLASSIFICATION: NON-FLAMMABLE LIQUID

CONDITIONS OF FLAMMABILITY: NONE. (PRODUCT WILL NOT BURN)

MEANS OF EXTINCTION: AS FOR SURROUNDING FIRE.

SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR FULL PROTECTIVE EQUIPMENT AND USE APPROVED SELF CONTAINED BREATHING APPARATUS. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS TO PREVENT PRESSURE BUILDUP AND POSSIBLE RUPTURE. DO NOT SPATTER OR SPLASH PRODUCT.

HAZARDOUS COMBUSTION PRODUCTS: OXIDES OF CARBON AND NITROGEN.

EXPLOSION DATA: CONTACT WITH "SOFT" METALS AS ALUMINIUM, ZINC OR GALVANIZED METALS CAN GENERATE HYDROGEN GAS. THIS GAS IS FLAMMABLE AND/OR EXPLOSIVE IN THE PRESENCE OF AN IGNITION SOURCE.

SENSITIVITY TO STATIC DISCHARGE: NOT SENSITIVE

SENSITIVITY TO MECHANICAL IMPACT : NOT SENSITIVE

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SECTION 06: ACCIDENTAL RELEASE MEASURES

LEAK AND SPILL

PROCEDURES: CLEANUP PERSONNEL MUST USE FULL PROTECTIVE EQUIPMENT. REMOVE UNPROTECTED PERSONNEL AWAY FROM SPILL AREA. VENTILATE AREA. CAUTION: SPILL AREA MAY BE SLIPPERY.

SMALL SPILLS: MOP UP, AND FLUSH AREA WITH WATER.

LARGE SPILLS: DIKE SPILL. DO NOT ALLOW SPILL TO ENTER OPEN WATERWAYS OR SEWERS. RECLAIM ALL MATERIAL POSSIBLE. ABSORB REMAINDER WITH INERT MATERIAL AND PLACE IN SUITABLE CONTAINERS FOR DISPOSAL. FLUSH AREA WITH WATER.

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES

AND EQUIPMENT: AVOID CONTACT WITH EYES, SKIN AND CLOTHING. AVOID CONTACT WITH OPEN WOUNDS OR BROKEN SKIN. DO NOT GENERATE/ BREATHE MISTS/ SPRAYS. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER USE. REMOVE CONTAMINATED CLOTHING AND LAUNDRY BEFORE RE-USE. KEEP CONTAINER CLOSED WHEN NOT IN USE. READ AND FOLLOW LABEL INSTRUCTIONS. DO NOT CONTAMINATE FOOD, WATER OR FEED DURING USE OR STORAGE OF THIS PRODUCT.

STORAGE

REQUIREMENTS: STORE IN A COOL WELL VENTILATED AREA AWAY FROM INCOMPATIBLE MATERIALS. KEEP FROM FREEZING. KEEP OUT OF REACH OF CHILDREN. DO NOT REUSE CONTAINER. STORE ONLY IN ORIGINAL CONTAINER.

SECTION 08: EXPOSURE CONTROLS/ PERSONAL PROTECTION

EYE PROTECTION: WEAR CHEMICAL SAFETY GOGGLES.

RESPIRATORY PROTECTION: NONE NORMALLY REQUIRED. USE NIOSH APPROVED RESPIRATOR IF SPRAY MISTS CAUSE IRRITATION OR IF EXPOSURE LIMITS ARE EXCEEDED.

GLOVES: WEAR RUBBER, VINYL OR NEOPRENE GLOVES.

OTHER PROTECTIVE EQUIPMENT: AS NEEDED TO PREVENT ALL CONTACT WITH PRODUCT.

SPECIFIC ENGINEERING CONTROLS..... USE MECHANICAL AND/OR LOCAL EXHAUST IF TLV IS EXCEEDED.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: LIQUID

ODOUR AND APPEARANCE: FAT LIKE ODOUR: STRAW TO LIGHT YELLOW COLOURED LIQUID

ODOUR THRESHOLD: NOT AVAILABLE

SPECIFIC GRAVITY: 1.009-1.019

VAPOUR PRESSURE : NOT AVAILABLE

VAPOUR DENSITY (AIR=1): NOT AVAILABLE

VOC CONTENT (%): 2.3-2.9 (EPA METHOD 24)

EVAPORATION RATE; NOT AVAILABLE

BOILING POINT; 100 °C (212 °F)

PH: 12-12.5

FREEZING POINT: NOT AVAILABLE

DENSITY (g/ ml): 1.009-1.019

COEFFICIENT OF WATER/OIL DISTRIBUTION.: COMPLETELY WATER SOLUBLE

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE

INCOMPATIBLE MATERIALS: AVOID CONTACT WITH ACIDS; NEUTRALIZES ACTIVE INGREDIENTS. AVOID CONTACT OF PRODUCT WITH ALUMINIUM, TIN, OR GALVANIZED SURFACES SINCE PITTING OR SURFACE DETERIORATION MAY RESULT.

CONDITIONS OF REACTIVITY: NONE

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON AND NITROGEN

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SECTION 11: TOXICOLOGICAL INFORMATION

IRRITANCY OF PRODUCT: MODERATE IRRITANT
SENSITIZATION TO MATERIAL: OLEIC ACID AND SODIUM LAURYL SULFATE COMPONENTS ARE NOT OCCUPATIONAL SKIN SENSITIZERS.
CARCINOGENICITY,: NO KNOWN CARCINOGENS LISTED BY OSHA, IARC OR NTP.
REPRODUCTIVE EFFECTS: NO KNOWN REPRODUCTIVE EFFECTS.
TERATOGENICITY: WITH RESPECT TO MONOETHANOLAMINE COMPONENT THERE IS NO HUMAN INFORMATION AVAILABLE FOR TERATOGENICITY AND EMBRYOTOXICITY. LIMITED STUDIES HAVE SHOWN DEVELOPMENTAL EFFECTS IN OFFSPRING OF RATS AND MICE ORALLY EXPOSED TO MATERNALLY TOXIC DOSES.
MUTAGENICITY: MONOETHANOLAMINE AND SODIUM LAURYL SULFATE COMPONENTS GAVE NEGATIVE RESULTS IN BACTERIAL ASSAYS (AMES TEST) IN YEAST AND IN CULTURED MAMMALIAN CELLS. IN VITRO INFORMATION SUGGESTS THAT POTASSIUM HYDROXIDE COMPONENT IS NOT MUTAGENIC.
TOXICOLOGICALLY SYNERGISTIC PRODUCTS: NOT AVAILABLE.

SECTION 12: ECOLOGICAL INFORMATION

THERE IS NO ECOLOGICAL INFORMATION AVAILABLE FOR PRODUCT. INDIVIDUAL COMPONENT INFORMATION (AS AVAILABLE) ONLY. ECOTOXICOLOGICAL INFORMATION TO FOLLOW IS BASED LARGELY OR COMPLETELY ON INFORMATION FOR COMPONENTS ON A 100% ACTIVE INGREDIENT BASIS.

ECOTOXICOLOGICAL INFORMATION:

AQUATIC TOXICITY: FISH SPECIES DATA: POTASSIUM HYDROXIDE LC50, 24 HR, MOSQUITO FISH: 80.0 mg/L
MONOETHANOLAMINE LC50 (96 HR), GOLDFISH: 170 mg/ L
MONOETHANOLAMINE LC50 (96 HR), FATHEAD MINNOW 2070 mg/ L
MONOETHANOLAMINE LC50 (96 HR), FATHEAD MINNOW : 176-240 mg/ L
MONOETHANOLAMINE LC50 (96 HR), FATHEAD MINNOW :125 mg/ L
OLEIC ACID LC 50 (48 HR)< UNSPECIFIED FISH SPECIES: >100 mg/ L
OLEIC ACID LC 50 (96 HR), FATHEAD MINNOW: 205 mg/ L
OLEIC ACID LC 50 (96 HR), GOLDFISH: 8 mg/ L (SODIUM SALT)
OLEIC ACID LC 50 (96 HR), RED KILLFISH: 217 mg/ L (SODIUM SALT)
SODIUM LAURYL SULFATE LC 50 (96 HR), RAINBOW TROUT: 4.6 mg/ L
SODIUM LAURYL SULFATE LC 50 (96 HR), FATHEAD MINNOW (FRY): 10.2 mg/ L
SODIUM LAURYL SULFATE LC 50 (96 HR), FATHEAD MINNOW (JUVENILE) :17 mg/ L
SODIUM LAURYL SULFATE LC 50 (96 HR), FATHEAD MINNOW (ADULT) :22.5 mg/ L
AQUATIC TOXICITY: INVERTEBRATES: MONOETHANOLAMINE LC50 (48 HR), DAPHNIA: 83-103 mg/ L
AQUATIC TOXICITY: (GROWTH INHIBITION) PLANTS: NO DATA
ACUTE AQUATIC TOXICITY: MICROORGANISMS: MONOETHANOLAMINE BACTERIA INHIBITION IC50: 700 mg/ L
MONOETHANOLAMINE, MICROORGANISMS IC 50: >2000 mg/ L
OLEIC ACID, EC 50, (16 HR), PSEUDOMONAS PUTIDA: >100 mg/ L
BIODEGRADABILITY: MONETHANOLAMINE BOD DAY5: 60% DAY 20: 100%
MONETHANOLAMINE BOD DAY5: 52% DAY 10: 73% DAY 20: 90%
WHEN RELEASED INTO THE SOIL, MONOETHANOLAMINE COMPONENT MAY BIODEGRADE TO A MODERATE EXTENT. WHEN RELEASED INTO THE SOIL, OLEIC ACID COMPONENT IS EXPECTED TO READILY BIODEGRADE . WHEN RELEASED INTO WATER, OLEIC ACID IS EXPECTED TO READILY BIODEGRADE WHEN RELEASED INTO THE WATER, OLEIC ACID COMPONENT IS EXPECTED TO HAVE A HALF-LIFE BETWEEN 1 AND 10 DAYS
MOBILITY: WHEN RELEASED INTO THE SOIL, MONOETHANOLAMINE COMPONENT MAY LEACH INTO GROUNDWATER.
PERSISTENCE: WHEN RELEASED INTO THE SOIL, OLEIC ACID COMPONENT IS EXPECTED TO HAVE A HALF-LIFE OF LESS THAN 1 DAY.
BIOACCUMULATIVE: MONOETHANOLAMINE HAS AN ESTIMATED BIOCONCENTRATION FACTOR (BCF) OF LESS THAN 100. MONOETHANOLAMINE COMPONENT IS NOT EXPECTED TO SIGNIFICANTLY BIOACCUMULATE. OLEIC ACID COMPONENT HAS AN ESTIMATED BIOCONCENTRATION FACTOR (BCF) OF GREATER THAN 100.
CHEMICAL FATE INFORMATION: NO DATA
OTHER INFORMATION: WHEN RELEASED INTO THE AIR, MONOETHANOLAMINE AND OLEIC ACID COMPONENTS ARE EXPECTED TO BE READILY DEGRADED BY REACTION WITH PHOTOCHEMICALLY PRODUCED HYDROXYL RADICALS. WHEN RELEASED INTO THE AIR, MONOETHANOLAMINE AND OLEIC ACID COMPONENTS ARE EXPECTED TO HAVE A HALF-LIFE OF LESS THAN 1 DAY. WHEN RELEASED INTO THE AIR, MONETHANOLAMINE MAY BE REMOVED FROM THE ATMOSPHERE TO A MODERATE EXTENT BY WET DEPOSITION. WHEN RELEASED INTO WATER, OLEIC ACID COMPONENT MAY EVAPORATE TO A MODERATE EXTENT. OLEIC ACID COMPONENT HAS A LOG OCTANOL-WATER PARTITION COEFFICIENT OF GREATER THAN 3.0. MONOETHANOLAMINE COD MEASURED: 1.54 mg/ mg. OCTANOL/ WATER PARTITION COEFFICIENT(MEASURED): -1.31 THODCARB(CALC): 1.31 mg/ mg THODNITR (CALC): 0.79 mg/ mg

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SECTION 13: DISPOSAL CONSIDERATIONS

IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

TDG: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE)
8
UN 3266
PACKING GROUP II

ADDITIONAL INFORMATION: NOT AVAILABLE
MARINE POLLUTANT: NO

SECTION 15: REGULATORY INFORMATION:

DSL STATUS: LISTED
WHMIS CLASSIFICATION: D2B, E

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR (CONTROLLED PRODUCTS REGULATIONS) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

SECTION 16: OTHER INFORMATION

DISCLAIMER: THIS INFORMATION WAS COMPILED FROM CURRENT, RELIABLE SOURCES AND IS BELIEVED TO BE CORRECT. AS DATA AND/ OR REGULATIONS CHANGE, AND CONDITIONS OF USE ARE BEYOND OUR CONTROL, NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.