



# MATERIAL SAFETY DATA SHEET

## ENVIRO CHEM TOUGH JOB 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 : ENVIRO CHEM TOUGH JOB CLEANER  
 PRODUCT USE : HEAVY DUTY CLEANER  
 WHMIS CATEGORY: D2B  
 PREPARED BY : ROCHESTER MIDLAND LIMITED.  
 PHONE NUMBER OF PREPARER: (905) 847-3000  
 DATE PREPARED: FEBRUARY 28, 2009

### 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 <sup>3</sup> STEL 6ppm STEL 15 mg/ m <sup>3</sup> ACGIH STEL 6 ppm TLV-TWA 2 mg/ m <sup>3</sup> NIOSH TWA 3ppm IDLH 30 ppm	ORAL 1720 mg/ Kg (RAT)  DERMAL 1000 mg/ Kg (RABBIT)	>1210 mg/ m <sup>3</sup> 4 HOUR EXPOSURE (MOUSE)
SODIUM LAURYL SULFATE	0.5-1.5	151-21-3	NOT AVAILABLE	ORAL 1288 mg/ Kg (RAT)  DERMAL 10,000 mg/ Kg (RABBIT)	>3900 mg/ m <sup>3</sup> 1 HOUR EXPOSURE (RAT)
OLEIC ACID	1-5	112-80-1	NOT AVAILABLE	ORAL 25000 mg/ Kg (RAT) DERMAL 500 mg/ Kg (RAT)	NOT AVAILABLE

### SECTION 03: HAZARDS IDENTIFICATION

#### POTENTIAL ACUTE HEALTH EFFECTS:

ROUTE OF ENTRY: EYES, SKIN, INHALATION, INGESTION

SKIN CONTACT: PROLONGED CONTACT MAY CAUSE IRRITATION AND DERMATITIS.

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

EYE: MAY CAUSE IRRITATION.

INHALATION: INHALATION OF CONCENTRATED SPRAY MISTS MAY CAUSE IRRITATION.

INGESTION: MAY CAUSE IRRITATION, NAUSEA, VOMITING. INGESTION OF LARGE AMOUNTS MAY BE HARMFUL.

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.

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## SECTION 04: FIRST AID MEASURES

EYES: FLUSH EYES WITH ABUNDANT WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN TO ENSURE COMPLETE IRRIGATION OF THE ENTIRE EYE CAVITY. GET MEDICAL ATTENTION.

SKIN: WASH SKIN WITH WATER. REMOVE CONTAMINATED CLOTHING. IF SYMPTOMS PERSIST, GET MEDICAL ATTENTION.

INHALATION: REMOVE VICTIM TO FRESH AIR. ASSIST BREATHING AS NEEDED. IF SYMPTOMS PERSIST, GET MEDICAL ATTENTION.

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

NOTES TO PHYSICIAN: ALL TREATMENTS SHOULD BE BASED ON OBSERVED SIGNS/SYMPTOMS OF DISTRESS IN THE PATIENT. THE POSSIBILITY OF OVEREXPOSURE TO MATERIALS OTHER THAN THIS PRODUCT SHOULD BE CONSIDERED

## 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: NONE EXPECTED.

SENSITIVITY TO STATIC DISCHARGE: NOT SENSITIVE

SENSITIVITY TO MECHANICAL IMPACT : NOT SENSITIVE

## 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. DO NOT BREATHE MISTS/ SPRAYS. REMOVE CONTAMINATED CLOTHING AND LAUNDER 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. MIX ONLY WITH WATER. WASH HAND THOROUGHLY AFTER USE.

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.

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## SECTION 08: EXPOSURE CONTROLS/ PERSONAL PROTECTION

EYE PROTECTION: WEAR CHEMICAL SAFETY GLASSES WITH SIDE SHIELDS.  
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: CLEAR ORANGE LIQUID WITH MILD ODOUR  
ODOUR THRESHOLD: NOT AVAILABLE  
SPECIFIC GRAVITY: 0.995-1.015  
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: 9.5-10  
FREEZING POINT: NOT AVAILABLE  
DENSITY (g/ ml): 0.995-1.015  
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.  
CONDITIONS OF REACTIVITY: NONE  
HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON AND NITROGEN

## SECTION 11: TOXICOLOGICAL INFORMATION

IRRITANCY OF PRODUCT: MILD IRRITANT  
SENSITIZATION TO MATERIAL: SODIUM LAURYL SULFATE COMPONENT MAY CAUSE ALLERGIC SENSITIVITY REACTION IN SENSITIVE PERSONS. OLEIC ACID COMPONENT IS NOT A SKIN SENSITIZER.  
CARCINOGENICITY,: NO KNOWN CARCINOGENS LISTED BY OSHA, IARC OR NTP.  
REPRODUCTIVE EFFECTS: NO KNOWN REPRODUCTIVE EFFECTS.  
TERATOGENICITY: SODIUM LAURYL SULFATE COMPONENT IS NOT EXPECTED TO BE TERATOGENIC. 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. OLEIC ACID COMPONENT IS NOT EXPECTED TO BE TERATOGENIC.  
MUTAGENICITY: MONOETHANOLAMINE GAVE NEGATIVE RESULTS IN BACTERIAL ASSAYS (AMES TEST) IN YEAST AND IN CULTURED MAMMALIAN CELLS. SODIUM LAURYL SULFATE COMPONENT IS NOT EXPECTED TO BE MUTAGENIC. OLEIC ACID COMPONENT IS NOT EXPECTED TO BE MUTAGENIC.  
TOXICOLOGICALLY SYNERGISTIC PRODUCTS: UNDER CERTAIN CONDITIONS, AMINES CAN REACT WITH NITROSATING AGENTS TO FORM N-NITROSO COMPOUNDS, WHICH MAY BE CARCINOGENIC. NOT EXPECTED UNDER NORMAL USE CONDITIONS.

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## SECTION 12: ECOLOGICAL INFORMATION

THERE IS NO ECOLOGICAL INFORMATION AVAILABLE FOR PRODUCT. ECOTOXICOLOGICAL INFORMATION TO FOLLOW IS BASED LARGELY OR COMPLETELY ON INFORMATION FOR COMPONENTS.

### AQUATIC TOXICITY:

#### FISH SPECIES DATA:

MONOETHANOLAMINE LC 50 ,96 HR, GOLDFISH: 170 mg/ L  
MONOETHANOLAMINE LC 50 ,96 HR, FATHEAD MINNOW 2070 mg/ L  
MONOETHANOLAMINE LC 50 ,96 HR, FATHEAD MINNOW : 227 mg/ L  
MONOETHANOLAMINE LC 50 ,96 HR, FATHEAD MINNOW :125 mg/ L  
MONOETHANOLAMINE LC 50 ,96 HR, RAINBOW TROUT: 150 mg/ L  
MONOETHANOLAMINE LC 50 ,96 HR, BLUEGILL :329 mg/ L  
MONOETHANOLAMINE LC 50 ,96 HR, ZEBRAFISH :3684 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

### INVERTEBRATES:

#### MICROORGANISMS:

MONOETHANOLAMINE LC 50, 48 HR, DAPHNIA MAGNA: 33-93 mg/ L  
MONOETHANOLAMINE ACTIVATED SLUDGE INHIBITION IC 50: >1000 mg/ L  
MONOETHANOLAMINE, PHYTOBACTERIUM PHOSPHOREUM IC 50: 13.7 mg/ L

(GROWTH INHIBITION) PLANTS: MONOETHANOLAMINE, EC 50, SCENEDESMUS SUBSPICATUS: 15 mg/ L

**BIODEGRADABILITY:** MONOETHANOLAMINE BOD DAY 5: 36% DAY 10: 45-49% DAY 20: 64-100%. MONOETHANOLAMINE OECD 301B: 97% 28 DAYS; OECD 301E:94% 28 DAYS; OECD 301F >70% 28 DAYS. 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. WHEN RELEASED INTO WATER, OLEIC ACID COMPONENT MAY EVAPORATE TO A MODERATE EXTENT

### MOBILITY:

#### PERSISTENCE:

WHEN RELEASED INTO THE SOIL, MONOETHANOLAMINE COMPONENT MAY LEACH INTO GROUNDWATER. 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 COMPONENT IS EXPECTED TO BE READILY DEGRADED BY REACTION WITH PHOTOCHEMICALLY PRODUCED HYDROXYL RADICALS. WHEN RELEASED INTO THE AIR, MONOETHANOLAMINE COMPONENT IS EXPECTED TO HAVE A HALF-LIFE OF 0.45 DAYS. WHEN RELEASED INTO THE AIR, MONOETHANOLAMINE MAY BE REMOVED FROM THE ATMOSPHERE TO A MODERATE EXTENT BY WET DEPOSITION. MONOETHANOLAMINE COD MEASURED: 0.76-1.27 mg/ mg; THOD : 2.36 mg/mg.

WHEN RELEASED INTO THE AIR, OLEIC ACID COMPONENT IS EXPECTED TO BE READILY DEGRADED BY REACTION WITH PHOTOCHEMICALLY PRODUCED HYDROXYL RADICALS. HYDROXYL RADICALS. WHEN RELEASED INTO THE AIR, OLEIC ACID COMPONENT IS EXPECTED TO HAVE A HALF-LIFE OF LESS THAN 1 DAY.

## SECTION 13: DISPOSAL CONSIDERATIONS

IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.

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## SECTION 14: TRANSPORT INFORMATION

TDG: NOT REGULATED UNDER TDG

ADDITIONAL INFORMATION: NOT AVAILABLE  
MARINE POLLUTANT: NO

## SECTION 15: REGULATORY INFORMATION:

DSL STATUS: LISTED  
HMIS CLASSIFICATION (H, F, R, PE): 1,0,0, B  
WHMIS CLASSIFICATION: D2B

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.