



MATERIAL SAFETY DATA SHEET

SHOPWORKS BIOBLAST

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: SHOPWORKS BIOBLAST
 PRODUCT USE: SOLVENT EMULSION DEGREASER
 WHMIS CATEGORY: E
 PREPARED BY: ROCHESTER MIDLAND LIMITED.
 PHONE NUMBER OF PREPARER: (905) 847-3000
 DATE PREPARED: MARCH 1, 2013



SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS#	EXPOSURE LEVELS	LD (50), ROUTE, SPECIES	LC(50), ROUTE, SPECIES
CITRIC ACID	0.5-1.5	77-92-9	OSHA TWA TOTAL 15 mg/ m ³ OSHA TWA RESPIRABLE 5 mg/ m ³ ACGIH TWA TOTAL 10 mg/ m ³	ORAL 3000- 11, 700 mg/ Kg (RAT)	NOT AVAILABLE
POTASSIUM HYDROXIDE	1-5	1310-58-3	ACGIH TLV-TWA 2 mg/ m ³ (CEILING) OSHA PEL 2 mg/ m ³ NIOSH REL-TWA 2 mg/ m ³ (CEILING)	ORAL 214-365 mg/ Kg (RAT) DERMAL 1260 mg/ Kg (RABBIT)	NOT AVAILABLE
OTHER INGREDIENTS	%	CAS#	EXPOSURE LEVELS	LD (50), ROUTE, SPECIES	LC(50), ROUTE, SPECIES
ALIPHATIC HYDROCARBON	15-40	69430-33-7	MANUFACTURERS TWA 100 ppm	ORAL >2000 mg/ Kg (RAT) DERMAL >2000 mg/ Kg (RAT)	>5000 ppm 1 HOUR EXPOSURE (RAT)
SILICIC ACID, SODIUM SALT SODIUM SILICATE	0.5-1.5	1344-09-8	NOT AVAILABLE	ORAL 1500 -3200 mg/ Kg (RAT) DERMAL 4640 mg/ Kg (RABBIT)	NOT AVAILABLE
TRIPROPYLENE GLYCOL METHYL ETHER	1-5	25498-49-1	NOT AVAILABLE	ORAL 3300 mg/ Kg (RAT) DERMAL >15440 mg /Kg (RABBIT)	LC 0 >30 ppm 8 HOUR EXPOSURE (RAT) NO DEATHS

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SECTION 03: HAZARDS IDENTIFICATION

POTENTIAL ACUTE HEALTH EFFECTS:

ROUTE OF ENTRY: EYES, SKIN, INHALATION, INGESTION

SKIN CONTACT: PROLONGED SKIN CONTACT MAY CAUSE IRRITATION AND DERMATITIS, POSSIBLE BURNS. SEVERITY OF BURNS IS DEPENDENT ON THE CONCENTRATION OF PRODUCT AND EXPOSURE DURATION.

SKIN ABSORPTION: PROLONGED OR REPEATED EXPOSURE TO VERY LARGE AMOUNTS OF THE TRIPROPYLENE GLYCOL METHYL ETHER COMPONENT MAY CAUSE ABSORPTION WITH ADVERSE EFFECTS AS DIZZINESS AND DROWSINESS. NOT EXPECTED WHEN USED AS DIRECTED.

EYE: DIRECT CONTACT WITH CONCENTRATE MAY CAUSE SEVERE IRRITATION, BURNS, POSSIBLE TISSUE DAMAGE

INHALATION: INHALATION MAY CAUSE DIZZINESS, NAUSEA, HEADACHE AND DROWSINESS, NASAL AND RESPIRATORY IRRITATION AND POSSIBLE BURNS.

INGESTION: HARMFUL IF SWALLOWED. MAY CAUSE SEVERE IRRITATION, BURNS, NAUSEA, VOMITING, DIZZINESS AND DIARRHEA. ASPIRATION OF MATERIAL INTO LUNGS DURING VOMITING CAN CAUSE CHEMICAL PNEUMONITIS.

ACUTE OVER-EXPOSURE

EFFECTS: AS ABOVE. TRIPROPYLENE GLYCOL METHYL ETHER COMPONENT MAY AGGRAVATE EXISTING KIDNEY, URETHRA OR BLADDER DISEASE.

CHRONIC OVER EXPOSURE

EFFECTS: PREVIOUSLY EXISTING SKIN AND/OR RESPIRATORY CONDITIONS MAY BE AGGRAVATED THROUGH OVEREXPOSURE TO PRODUCT. PROLONGED OR HIGH EXPOSURES TO TRIPROPYLENE GLYCOL METHYL ETHER COMPONENT MAY CAUSE LIVER AND KIDNEY CHANGES.

SECTION 04: FIRST AID MEASURES

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 MEDICAL ATTENTION.

SKIN: WASH SKIN WITH SOAP AND WATER UNTIL SLIPPERY FEELING IS GONE. REMOVE CONTAMINATED CLOTHING. IF SYMPTOMS PERSIST, GET MEDICAL ATTENTION.

INHALATION: IF SAFE TO ENTER VICTIMS AREA, REMOVE VICTIM TO FRESH AIR. ASSIST BREATHING AS NEEDED. GET MEDICAL ATTENTION.

INGESTION: **DO NOT INDUCE VOMITING. 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 AVAILABLE

LOWER EXPLOSION LIMIT

(% BY VOLUME): NOT AVAILABLE

AUTO-IGNITION TEMPERATURE: NOT AVAILABLE

FLAMMABILITY CLASSIFICATION: NON-FLAMMABLE LIQUID

CONDITIONS OF FLAMMABILITY: NONE.

MEANS OF EXTINCTION: USE FOAM, DRY CHEMICAL, CARBON DIOXIDE, WATER FOG OR SPRAY.

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. DIKE TO CONTAIN WATER USED IN FIGHTING FIRE. DO NOT ALLOW THIS WATER INTO OPEN WATERWAYS OR SEWERS.

HAZARDOUS COMBUSTION

PRODUCTS:

EXPLOSION DATA:

OXIDES OF CARBON AND NITROGEN, OTHER HYDROCARBONS

"EMPTY CONTAINERS" MAY CONTAIN PRODUCT RESIDUE (LIQUID AND VAPOUR). DO NOT PRESSURIZE, CUT WELD, PUNCTURE, DRILL ON OR NEAR CONTAINERS: THEY MAY EXPLODE AND CAUSE INJURY AND/OR DEATH. 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. BRIEF INCIDENTAL CONTACT SUCH AS OVERSPRAY IS NOT EXPECTED TO CAUSE AN EXPLOSION HAZARD.

SENSITIVITY TO STATIC

DISCHARGE:

NOT EXPECTED TO BE SENSITIVE WHEN USED AS DIRECTED

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 OR SPILL RESIDUES 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: CORROSIVE PRODUCT- HANDLE WITH CARE. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. WASH SKIN THOROUGHLY AFTER HANDLING. AVOID INHALATION OF MISTS/ SPRAYS. REMOVE CONTAMINATED CLOTHING AND LAUNDRY BEFORE RE-USE KEEP CONTAINER CLOSED WHEN NOT IN USE. MIX ONLY WITH WATER; ALWAYS ADD PRODUCT TO WATER: NEVER WATER TO PRODUCT. READ AND FOLLOW LABEL INSTRUCTIONS. DO NOT CONTAMINATE FOOD, WATER OR FEED DURING USE OR STORAGE OF THIS PRODUCT.

STORAGE

REQUIREMENTS: KEEP CONTAINER CLOSED WHEN NOT IN USE. STORE INDOORS 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

GENERAL ADVICE: THESE RECOMMENDATIONS PROVIDE GENERAL GUIDANCE FOR HANDLING THIS PRODUCT. PERSONAL PROTECTIVE EQUIPMENT SHOULD BE SELECTED FOR INDIVIDUAL APPLICATIONS AND SHOULD CONSIDER FACTORS WHICH AFFECT EXPOSURE POTENTIAL, SUCH AS HANDLING PRACTICES, CHEMICAL CONCENTRATIONS AND VENTILATION. IT IS ULTIMATELY THE RESPONSIBILITY OF THE EMPLOYER TO FOLLOW REGULATORY GUIDELINES ESTABLISHED BY LOCAL AUTHORITIES

EYE PROTECTION: WEAR CHEMICAL SPLASH GOGGLES. USE FACE SHIELD IF SPLASHES POSSIBLE.

RESPIRATORY

PROTECTION: USE NIOSH APPROVED RESPIRATOR IF EXPOSURE LIMITS ARE EXCEEDED OR IRRITATION OCCURS. USE RESPIRATOR IN ENCLOSED SPACE.

GLOVES: WEAR NEOPRENE, NITRILE OR RUBBER GLOVES.

OTHER PROTECTIVE

EQUIPMENT: AS NEEDED TO PREVENT ALL CONTACT WITH PRODUCT.

SPECIFIC ENGINEERING

CONTROLS: USE GENERAL MECHANICAL AND / OR LOCAL EXHAUST. USE CORROSION RESISTANT MATERIAL.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	LIQUID
ODOUR AND APPEARANCE:	CLEAR PALE YELLOW TO BROWN LIQUID: MILD ODOUR
ODOUR THRESHOLD:	NOT AVAILABLE
SPECIFIC GRAVITY:	0.92-0.93
VAPOUR PRESSURE :	7.5 mm Hg @ 20 °C
VAPOUR DENSITY (AIR=1):	>1
VOC CONTENT (%):	33 (ARB 310)
EVAPORATION RATE;	1.26
BOILING POINT;	100° C (212 ° F)
PH:	12-12.4
FREEZING POINT:	NOT AVAILABLE
DENSITY (g/ ml):	0.92-0.93
COEFFICIENT OF WATER/OIL DISTRIBUTION:	COMPLETELY WATER SOLUBLE

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE WHEN USED AND STORED AS DIRECTED.

INCOMPATIBLE MATERIALS: DO NOT MIX WITH STRONG ACIDS AND OXIDIZING AGENTS.

CONDITIONS OF REACTIVITY: WHILE NOT FLAMMABLE AVOID OPEN FLAMES, WELDING ARCS OR OTHER IGNITION SOURCES. ALWAYS ADD PRODUCT TO WATER: NEVER WATER TO PRODUCT- THERMAL REACTION MAY BE GENERATED

HAZARDOUS DECOMPOSITION

PRODUCTS: OXIDES OF CARBON AND NITROGEN, OTHER HYDROCARBONS

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SECTION 11: TOXICOLOGICAL INFORMATION

IRRITANCY OF PRODUCT: MODERATE EYE IRRITANT
SENSITIZATION TO MATERIAL: ALIPHATIC HYDROCARBON AND TRIPROPYLENE GLYCOL METHYL ETHER COMPONENTS ARE NOT SKIN SENSITIZERS.
CARCINOGENICITY: NO KNOWN CARCINOGENS LISTED BY OSHA, IARC OR NTP.
REPRODUCTIVE EFFECTS: NO KNOWN REPRODUCTIVE EFFECTS. FOR TRIPROPYLENE GLYCOL METHYL ETHER COMPONENT, IN LABORATORY ANIMAL STUDIES, EFFECTS ON REPRODUCTION HAVE BEEN SEEN ONLY AT DOSES THAT PRODUCED SIGNIFICANT TOXICITY TO PARENT ANIMALS.
TERATOGENICITY: NO ADVERSE TERATOGENIC EFFECTS ANTICIPATED FOR CITRIC ACID AND POTASSIUM HYDROXIDE COMPONENTS. TRIPROPYLENE GLYCOL METHYL ETHER DID NOT CAUSE BIRTH DEFECTS OR OTHER EFFECTS IN THE FETUS EVEN AT DOSES THAT CAUSED TOXIC EFFECT IN THE MOTHER.
MUTAGENICITY: IN VITRO INFORMATION SUGGESTS THAT POTASSIUM HYDROXIDE COMPONENT IS NOT MUTAGENIC. IN VITRO GENETIC TOXICITY STUDIES WERE NEGATIVE FOR TRIPROPYLENE GLYCOL METHYL ETHER COMPONENT. IN VIVO GENETIC TOXICITY DATA AVAILABLE FOR TRIPROPYLENE GLYCOL METHYL ETHER COMPONENT. NO ADVERSE MUTAGENIC EFFECTS ANTICIPATED FOR CITRIC ACID COMPONENT. SODIUM SILICATE COMPONENT IS NOT MUTAGENIC TO E.COLI WHEN TESTED IN MUTAGENIC BIOASSAY. HYDROCARBON SOLVENT COMPONENT IS NOT MUTAGENIC.
TOXICOLOGICALLY SYNERGISTIC PRODUCTS: NOT AVAILABLE
OTHER INFORMATION: INGESTION OVER TIME OF GRAM QUANTITIES OF SODIUM SILICATE COMPONENT MAY CAUSE KIDNEY STONES AND OTHER SILICEOUS URINARY STONES IN HUMANS. NOT EXPECTED WITH OCCUPATIONAL EXPOSURE

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:

POTASSIUM HYDROXIDE LC50 (24 HR) MOSQUITO FISH: 80.0 mg/L
POTASSIUM HYDROXIDE LC 50, 96 HR, FATHEAD MINNOW: 179 mg/ L
SODIUM SILICATE LC 50, 96 HR, MOSQUITO FISH: 2320 ppm (FRESHWATER)
SODIUM SILICATE LC 50, 96 HR, MOSQUITO FISH: 530 mg/ L
SODIUM SILICATE LC 50, 96 HR, ZEBRA FISH: 210 ppm
CITRIC ACID LC 50, 96 HR, GOLDFISH 440 – 706 mg/ L
ALIPHATIC HYDROCARBON: EXPECTED TO BE TOXIC: 1<LC/EC/IC50<= 10 mg/ L
TRIPROPYLENE GLYCOL METHYL ETHER LC 50, 96 HR, FATHEAD MINNOW: 11619 mg/ L

INVERTEBRATES:

POTASSIUM HYDROXIDE, EC 50, 48 HR, WATER FLEA: 60 mg/ L
SODIUM SILICATE, LC50, 96 HR: DAPHNIA 247 ppm
SODIUM SILICATE, LC50, 48 HR: DAPHNIA 113 mg/ L
SODIUM SILICATE LC 50, 96 HR: SNAIL EGGS 632 ppm
SODIUM SILICATE LC 50, 96 HR: AMPHIPODA 160 ppm
ALIPHATIC HYDROCARBON: EXPECTED TO BE TOXIC: 1<LC/EC/IC50<= 10 mg/ L
TRIPROPYLENE GLYCOL METHYL ETHER LC 50, DAPHNIA MAGNA: >10000 mg/ L

MICROORGANISMS:

(GROWTH INHIBITION) PLANTS: ALIPHATIC HYDROCARBON: EXPECTED TO BE TOXIC: 1<LC/EC/IC50<= 10 mg/ L

POTASSIUM HYDROXIDE, EC 50, 96 HR, GREEN ALGAE: 61 mg/ L

TRIPROPYLENE GLYCOL METHYL ETHER LC 50, PSEUDOKICHNERIELLA SUBCAPITA: 21,010 mg/ L

TRIPROPYLENE GLYCOL METHYL ETHER IS PRACTICALLY NON-TOXIC TO AQUATIC ORGANISMS ON AN ACUTE BASIS: LC 50 >100 mg/ L IN THE MOST SENSITIVE SPECIES. TOXICITY OF POTASSIUM HYDROXIDE AND SODIUM SILICATE COMPONENT IS PRIMARILY ASSOCIATED WITH PH. AQUATIC ORGANISMS BECOME INCREASING STRESSED AS PH EXCEEDS 9, WITH MANY ORGANISMS BEING INTOLERANT OF PH LEVELS IN EXCESS OF 10. TOXICITY OF CITRIC ACID COMPONENT IS PRIMARILY ASSOCIATED WITH PH. AQUATIC ORGANISMS BECOME INCREASING STRESSED AS PH BECOMES MORE ACIDIC. SODIUM SILICATE COMPONENT HAS EXHIBITED MODERATE TO HIGH TOXICITY TO AQUATIC ORGANISMS WHILE EXHIBITING MODERATE TOXICITY TO TERRESTRIAL ORGANISMS.

BIODEGRADABILITY: POTASSIUM HYDROXIDE AND SODIUM SILICATE COMPONENTS ARE INORGANIC SUBSTANCES AND THEREFORE ARE NOT AMENABLE TO BIODEGRADATION. THEY HAVE NO BOD. CITRIC ACID BOD 5 = 0.528 mg/ Kg CITRIC ACID COD 5 = 0.728 mg/ Kg CITRIC ACID BIODEGRADATION IS 98% AFTER 2 DAYS. TRIPROPYLENE GLYCOL METHYL ETHER COMPONENT IS READILY BIODEGRADABLE. OECD 301F TEST METHOD 60% BIODEGRADATION IN 28 DAYS. ALIPHATIC HYDROCARBON COMPONENT IS READILY BIODEGRADABLE

MOBILITY: ALIPHATIC HYDROCARBON COMPONENT ADSORBS TO SOIL AND HAS LOW MOBILITY. FLOATS ON WATER. SODIUM SILICATE COMPONENT SINKS AND DISSOLVES IN WATER. POTENTIAL IS HIGH FOR MOBILITY IN SOIL FOR TRIPROPYLENE GLYCOL METHYL ETHER COMPONENT.

PERSISTENCE: SODIUM SILICATE COMPONENT WILL PERSIST IN AQUATIC AND TERRESTRIAL SYSTEMS

BIOACCUMULATIVE: SODIUM SILICATE COMPONENT DOES NOT BIOACCUMULATE EXCEPT IN SPECIES THAT USE SILICA AS A STRUCTURAL MATERIAL SUCH AS DIATOMS AND SILICEOUS SPONGES. HYDROCARBON COMPONENT HAS THE POTENTIAL TO BIOACCUMULATE. TRIPROPYLENE GLYCOL METHYL ETHER HAS A LOW POTENTIAL FOR BIOACCUMULATION. CITRIC ACID AND POTASSIUM HYDROXIDE COMPONENTS DO NOT BIOACCUMULATE.

CHEMICAL FATE INFORMATION: SODIUM SILICATE COMPONENT YIELDS DISSOLVED SILICA THAT IS INDISTINGUISHABLE FROM NATURAL DISSOLVED SILICA

OTHER INFORMATION: SODIUM SILICATE COMPONENT DOES NOT BIOCONCENTRATE UP THE FOOD CHAIN

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SECTION 13: DISPOSAL CONSIDERATIONS

IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

TDG: UN 3266
CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM METASILICATE)
8
PACKING GROUP II
ADDITIONAL INFORMATION: NOT AVAILABLE
MARINE POLLUTANT: NO

SECTION 15: REGULATORY INFORMATION:

DSL STATUS: LISTED
HMIS CLASSIFICATION (H, F, R, PE): 2,1,0, B
WHMIS CLASSIFICATION: 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.