



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFICATION

Brand Name: Microbloc® Biologx Fire and Content Cleaner

Chemical Name: FIRE AND CONTENT CLEANER

Common Name: HEAVY CLEANER WITH ADDED ENZYMES

HMIS NFPA

HEALTH	1	1
FLAMMABILITY	0	0
PHYSICAL HAZARD	0	0
HMIS PPE	C	

PREPARER
Microbloc, LLC
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EMERGENCY TELEPHONE NUMBER
1-888-328-6653

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS	EXPOSURE LEVELS	LD(50)ROUTE SPECIES
MONOETHANOLAMINE	1-5	141-43-5	OSHA PEL TWA 3ppm TWA 8 mg STEL 6ppm STEL 15 mg ACGIH STEL 6 ppm TLV-TWA 2 mg	ORAL 1720 mg (RAT) DERMAL 1000mg (RABBIT)
POTASSIUM HYROXIDE	1-5	1310-58-3	ACGIH TLV-TWA 2 mg OSHA PEL 2 mg	ORAL 273 mg (MALE RAT)
SODIUM LAURYL SULFATE	1-5	151-21-3	N/A	ORAL 1280 mg (RAT) DERMAL 580mg (MALE RABBIT)
OLEIC ACID	1-5	112-80-1	N/A	ORAL >19200mg (MALE RAT)
OTHER INGREDIENTS	%	CAS	EXPOSURE LEVELS	LD(50)ROUTE SPECIES
VIABLE BACTERIAL CULTURES	NA	NA	NA	NA

3. HAZARDS IDENTIFICATION

POTENTIAL ACUTE HEALTH EFFECTS:
ROUTE OF ENTRY: EYES, SKIN, INHALATION, INGESTION

SKIN CONTACT: MAY CAUSE IRRITATION. 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.

SKIN ABSORPTION : SYSTEMATICALLY TOXIC CONCENTRATIONS WILL PROBABLY NOT BE ABSORBED THROUGH THE SKIN.

EYE: DIRECT CONTACT MAY CAUSE IRRITATION.

INHALATION: MAY CAUSE IRRITATION, COUGHING, CONGESTION.

INGESTION: MAY CAUSE IRRITATION, NAUSEA OR VOMITING.
ACUTE OVER-EXPOSURE

EFFECTS: AS ABOVE. OVEREXPOSURE MAY CAUSE HEADACHE, DIZZINESS, TIREDNESS, NAUSEA AND VOMITING.

CHRONIC OVER EXPOSURE
EFFECTS: DERMATITIS.

POTENTIAL HEALTH EFFECTS

PRIMARY ROUTE(S) OF ENTRY
Eye and Skin contact, Ingestion

SYMPTOMS OF EXPOSURE

Eye Contact: None.

Skin Contact: None.

Ingestion: Direct ingestion may cause mild diarrhea.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None known.

REPORTED AS CARCINOGEN OR POTENTIAL CARCINOGEN

Not Applicable

OSHA

National Toxicology Program (NTP) International Agency for Research on Cancer (IARC)

4. FIRST AID MEASURES

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.

5. 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

6. 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.

7. 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 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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GOGGLES. RESPIRATORY PROTECTION: NONE NORMALLY REQUIRED. USE 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: LIQUID

ODOR AND APPEARANCE: FAT LIKE ODOUR: STRAW TO LIGHT YELLOW COLOURED LIQUID ODOR THRESHOLD: NOT AVAILABLE

SPECIFIC GRAVITY: 1.009-1.019

VAPOR PRESSURE : NOT AVAILABLE VAPOR

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

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

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

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: ETHOXYLATED LINEAR ALCOHOL LC50, 96 HR STATIC ACUTE, FATHEAD MINNOW: 8.5 mg/L
ALKYL ARYL SULFONIC ACID LC50, 96 HR, STATIC, ONCORHYNCHUS MYKISS: 3 mg/L
AQUATIC TOXICITY: INVERTEBRATES: ETHOXYLATED LINEAR ALCOHOL LC50, 96 HR STATIC ACUTE, DAPHNIA: 5.3 mg/L
ALKYL ARYL SULFONIC ACID EC50, 48 HR, DAPHNIA MAGNA: 2.9 mg/L
AQUATIC TOXICITY: (GROWTH INHIBITION) PLANTS: NO DATA
ACUTE AQUATIC TOXICITY: MICROORGANISMS: ALKYLARYL SULFONIC ACID EC50, 6 HR, PSEUDOMONAS FLUORESCENS : 5 mg/L
BIODEGRADABILITY: ETHOXYLATED, LINEAR ALCOHOL COMPONENT IS READILY BIODEGRADABLE. ETHOXYLATED LINEAR ALCOHOL COMPONENT HAS 88% OXYGEN REMOVAL IN 28 DAYS. 100% DOC REMOVAL
MOBILITY: NOT AVAILABLE.
PERSISTENCE: NOT AVAILABLE
BIOACCUMULATIVE: NOT AVAILABLE
CHEMICAL FATE INFORMATION: NOT AVAILABLE.
OTHER INFORMATION: NOT AVAILABLE.

13. DISPOSAL CONSIDERATIONS

IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.

14. TRANSPORTATION INFORMATION

CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE) 8 UN 3226

15. REGULATORY INFORMATION



(Not meant to be all-inclusive, selected regulations represented)

DSL STATUS: LISTED

16. OTHER INFORMATION

ABBREVIATIONS

C:	Ceiling limit	N/A:	Not Applicable	N/D:	Not determined
N/E:	Not established	N/K:	Not known	RQ:	Reportable quantity
TPQ:	Threshold Planning Quantity				

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Prepared by: MSDS Coordinator

Reasons for Revision: Company Address Change

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