

MATERIAL SAFETY DATA SHEET

MSDS DATE:07/20/2008

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOPS, BIOLOGICAL BUFFER
SYNONYMS: N/A
PRODUCT CODES: 18900
MANUFACTURER: ELECTRON MICROSCOPY SCIENCES
DIVISION: 1560 INDUSTRY ROAD/P.O. BOX 550
ADDRESS: HATFIELD, PA 19440

EMERGENCY PHONE: 215-412-8400
CHEMTREC PHONE: 800-424 9300

FAX PHONE: 215-412-8450

CHEMICAL NAME: N/A
CHEMICAL FAMILY: NA

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT:</u>	<u>CAS NO.</u>	<u>%WT</u>
3-(N-MORPHOLINO)	1132-61-2	100%

OSHA-PEL-TWA

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: CAUTION! MAY BE HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

ROUTES OF ENTRY: INHALATION, EYES, SKIN, INGESTION

POTENTIAL HEALTH EFFECTS

EYES: MAY CAUSE IRRITATION AND REDNESS

SKIN: MAY CAUSE IRRITATION AND REDNESS

INGESTION: NO INFORMATION FOUND, BUT COMPOUND SHOULD BE HANDLED AS A POTENTIAL HEALTH HAZARD.

INHALATION: MATERIAL MAY IRRITATE CAUSE IRRITATION TO THE RESPIRATORY TRACT.

ACUTE HEALTH HAZARDS: N/A

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

CARCINOGENICITY IARC: NONE
NTP: KNOWN (NO) ANTICIPATED (NO)

SECTION 4: FIRST AID MEASURES

EYES: FLUSH WITH WATER FOR 15 MINUTES IF IRRITATION OCCURS. SEEK MEDICAL ATTENTION

SKIN: WASH WITH SOAP AND WATER. IF IRRITATION OCCURS. SEEK MEDICAL ATTENTION.

INGESTION: INDUCE VOMITING IMMEDIATELY PROVIDED PERSON IS CONSCIOUS. SEEK MEDICAL ATTENTION

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INHALATION: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: N/A
(% BY VOLUME) LOWER:

FLASH POINT: 116C (241F)CC

F:

C:

METHOD USED:

AUTOIGNITION TEMPERATURE: N/A

F:

C:

NFPA HAZARD CLASSIFICATION

HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0
OTHER:

HMIS HAZARD CLASSIFICATION

HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0
PROTECTION: C

EXTINGUISHING MEDIA: WATER SPRAY , DRY CHEMICAL, ALCOHOL FOAM, OR CARBON DIOXIDE.
PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSION HAZARDS: FINE DUST DISPERSED IN AIR IN SUFFICIENT CONCENTRATIONS, AND IN THE PRESENCE OF AN IGNITION SOURCE IS A POTENTIAL DUST EXPLOSION HAZARD.

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: WEAR CHEMICAL RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING. AVOID CONTACT WITH EYES, SKIN. USE NON SPARKING TOOLS AND EQUIPMENT. REDUCE AIRBORNE DUST AND PREVENT SCATTERING BY MOISTENING WITH WATER. PICK UP SPILL FOR RECOVERY OR DISPOSAL AND PLACE IN A CLOSED CONTAINER.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: KEEP CONTAINER TIGHTLY CLOSED, STORE IN A COOL DRY PLACE, IRRITANT. AVOID DUST FORMATION AND CONTROL IGNITION SOURCES. EMPTYING CONTENTS INTO A NON-INERT ATMOSPHERE WHERE FLAMMABLE VAPORS MAY BE PRESENT COULD CAUSE A FLASH FIRE OR EXPLOSION DUE TO STATISTATIC DISCHARGE.

OTHER PRECAUTIONS: ADDITIONAL SAFETY EQUIPMENT SHOULD INCLUDE SAFETY SHOWER/EYE BATH. WASH THOROUGHLY AFTER HANDLING.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: N/A

VENTILATION: WELL VENTILATED AREA

RESPIRATORY PROTECTION: PERSONAL RESPIRATORS (NIOSH APPROVED) WARNING: AIR-PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.

EYE PROTECTION: SAFETY GLASSES

SKIN PROTECTION: WEAR LAB COAT AND GLOVES

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: USE GOOD LABORATORY PRACTICE WHEN WORKING WITH THIS SUBSTANCE.

WORK HYGIENIC PRACTICES: WASH THOROUGHLY AFTER HANDLING. WASH CLOTHING BEFORE REUSE.

EXPOSURE GUIDELINES: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: WHITE POWDER

ODOR: ODORLESS

PHYSICAL STATE: SOLID

pH AS SUPPLIED: 6.5-7.9

pH (Other):

BOILING POINT: (LIKE) WATER

F:

C:

MELTING POINT: 277C

F:

C:

FREEZING POINT: N/A

F:

C:

VAPOR PRESSURE (mmHg): N/A

@

F:

C:

VAPOR DENSITY (AIR = 1): N/A

@

F:

C:

@

F:

C:

EVAPORATION RATE: N/A

BASIS (=1):

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

SOLUBILITY IN WATER: AQUEOUS

PERCENT SOLIDS BY WEIGHT:>98%

PERCENT VOLATILE: N/A

BY WT/ BY VOL @

F:

C:

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VOLATILE ORGANIC COMPOUNDS (VOC): N/A

WITH WATER: LBS/GAL
WITHOUT WATER: LBS/GAL

DENSITY g/cm³: N/A

VISCOSITY: n/a

@

F:

C:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE

CONDITIONS TO AVOID (STABILITY): HEAT, INCOMPATIBLES.

INCOMPATIBILITY (MATERIAL TO AVOID): STRONG OXIDIZERS, STRONG BASES

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: BURNING MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, SULFUR OXIDES, AND NITROGEN OXIDES. FORMATION OF 1,3-PROPANE SULFONE AT HIGH TEMPERATURES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: N/A

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: N/A

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: COMPLY WITH FEDERAL, STATE, LOCAL REGULATIONS.

RCRA HAZARD CLASS: N/A

SECTION 13: DISPOSAL CONSIDERATIONS (con't)

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: NOT A REGULATED MATERIAL

HAZARD CLASS:

ID NUMBER:

PACKING GROUP:

LABEL STATEMENT:

WATER TRANSPORTATION

PROPER SHIPPING NAME:

HAZARD CLASS: SAME

ID NUMBER:

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PACKING GROUP:
LABEL STATEMENTS:

AIR TRANSPORTATION

PROPER SHIPPING NAME:
HAZARD CLASS: SAME
ID NUMBER:
PACKING GROUP:
LABEL STATEMENTS:

OTHER AGENCIES: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): N/A

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): 103

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): SUBJECT TO SARA SECTION 313 ANNUAL TOXIC CHEMICAL RELEASE REPORTING.

311/312 HAZARD CATEGORIES: N/A

313 REPORTABLE INGREDIENTS: N/A

STATE REGULATIONS: N/A

INTERNATIONAL REGULATIONS: N/A

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION:

DISCLAIMER: IN COMPLIANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD, 29 C.F.R 1910. 1200, WE ARE PROVIDING YOU WITH A MSDS FOR THE HAZARDOUS MATERIAL YOU ARE PURCHASING.

IT IS YOUR RESPONSIBILITY TO EDUCATE YOUR EMPLOYEES ON THE SAFE USE OF THE HAZARDOUS MATERIAL.

ELECTRON MICROSCOPY SCIENCES MAKES NO PRESENTATION AS TO THE ACCURACY OF THE INFORMATION IN THE MSDS. THE INFORMATION IS BELIEVED TO BE CORRECT; HOWEVER, YOU (THE CUSTOMER), SHOULD PERFORM YOUR OWN INVESTIGATION AND INDEPENDENT VERIFICATION. IF YOU RESELL THE PRODUCT, YOU ARE RESPONSIBLE TO FORWARD THE INFORMATION IN THE MSDS TO YOUR CUSTOMER.