

MATERIAL SAFETY DATA SHEET

MSDS DATE:07/27/07

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: LUMINOX
SYNONYMS: N/A
PRODUCT CODES : 60514-01

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 -4300

FAX PHONE: 215-412-8450

CHEMICAL NAME: LUMINOX
CHEMICAL FAMILY: N/A

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

DIPROPYLENE GLYCOL MONOMETHYL ETHER
PROPLENE GLYCOL N-BUTYL ETHER

| <u>CAS NO.</u> | <u>% WT</u> | <u>% VOL</u> | <u>SARA 313 REPORTABLE</u> |
|--------------------|-------------|--------------|----------------------------|
| 34590-94-8 | N/A | 15-40 | |
| 5131-66-8 | N/A | 5-10 | |
| | <u>ppm</u> | <u>mg/m3</u> | |
| OSHA PEL-TWA: | N/A | N/A | |
| OSHA PEL STEL : | N/A | N/A | |
| OSHA PEL CEILING: | N/A | N/A | |
| ACGIH TLV-TWA: | 100 | N/A | |
| ACGIH TLV STEL: | N/A | N/A | |
| ACGIH TLV CEILING: | N/A | N/A | |

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

ROUTES OF ENTRY: SKIN CONTACT, EYE CONTACT, INHALATION AND INGESTION

POTENTIAL HEALTH EFFECTS

EYES: MAY CAUSE PAIN. SEVERE IRRITATION. MAY CAUSE SWELLING.

SKIN: MAY CAUSE REDNESS, SWELLING. MAY CAUSE SLIGHT IRRITATION

INGESTION: MAY CAUSE DIARRHEA. MAY CAUSE WEAKNESS. MAY CAUSE DIZZINESS. MAY CAUSE HEADACHE. LARGE AMOUNTS MAY CAUSE RED BLOOD CELL DAMAGE.

INHALATION: MAY CAUSE HEADACHE. POSSIBLE IRRITATION OF THE UPPER RESPIRATORY TRACT. MAY CAUSE DISCOMFORT. MAY CAUSE HEADACHE.

ACUTE HEALTH HAZARDS: N/A

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

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CARCINOGENICITY

OSHA: N/A
OTHER: N/A

ACGIH: N/A

NTP: N/A

IARC: N/A

SECTION 4: FIRST AID MEASURES

EYES: CHECK FOR AND REMOVE CONTACT LENSES. FLUSH WITH RUNNING WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. IF IRRITATION OCCURS. SEEK MEDICAL ATTENTION

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

INGESTION: GET MEDICAL ATTENTION IMMEDIATELY. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DRINK A LARGE AMOUNT OF WATER.

INHALATION: REMOVE VICTIM TO FRESH AIR. IF BREATHING IS DIFFICULT ADMINISTER RESPIRATION. OBTAIN MEDICAL ATTENTION.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

SECTION 5: FIRE-FIGHTING MEASURES

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

FLASH POINT:

F: 200 DEG

C: 93.3 DEG

METHOD USED: N/A

AUTOIGNITION TEMPERATURE:N/A

F: N/A

C: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: N/A

FLAMMABILITY: N/A

REACTIVITY: N/A

OTHER: N/A

HMIS HAZARD CLASSIFICATION

HEALTH: N/A

FLAMMABILITY: N/A

REACTIVITY: N/A

PROTECTION: N/A

EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES: SELF CONTAINED BREATHING APPARATUS REQUIRED. FIREFIGHTERS SHOULD WEAR THE USUAL PROTECTIVE GEAR. USE WATER TO COOL EXPOSED CONTAINERS

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON (COx)). HYDROCARBONS

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: CONTAIN THE SPILL. PREVENT ENTRY INTO DRAINS, SEWERS, AND OTHER WATERWAYS. WEAR APPROPRIATE PROTECTIVE EQUIPMENT. SOAK UP WITH AN ABSORBENT MATERIAL. SMALL AMOUNTS MAY BE FLUSHED INTO SANITARY SEWER. PLACE IN APPROPRIATE CONTAINER FOR DISPOSAL.

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SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: AVOID BREATHING VAPORS/ MISTS. WEAR PERSONAL PROTECTIVE EQUIPMENT APPROPRIATE TO TASKS. WASH THOROUGHLY AFTER HANDLING. KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN, EYES, AND CLOTHING. KEEP AWAY FROM EXCESSIVE HEAT AND OPEN FLAME. LAUNDRY CONTAMINATED CLOTHING PRIOR TO REUSE.

STORE AWAY FROM INCOMPATIBLE MATERIALS. KEEP CONTAINERS CLOSED WHEN NOT IN USE. AVOID EXTREME TEMPERATURES.

OTHER PRECAUTIONS: N/A

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

VENTILATION: LOCAL EXHAUST AT POINTS OF EMISSION. MECHANICAL VENTILATION FOR CONFINED AREAS. VENTILATION SHOULD BE CORROSION PROOF

RESPIRATORY PROTECTION: IF TLV IS EXCEEDED, WEAR AN APPROVED RESPIRATOR

EYE PROTECTION: CHEMICAL SAFETY GOGGLES WITH SIDE-SHIELDS

SKIN PROTECTION: NEOPRENE OR RUBBER GLOVES (WITH CUFFS)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: SAFETY SHOES PER LOCAL REGULATIONS. CLOTHING REQUIRED TO PREVENT SKIN CONTACT. EYE WASH FACILITY SHOULD BE IN CLOSE PROXIMITY. EMERGENCY SHOWER SHOULD BE IN CLOSE PROXIMITY.

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

EXPOSURE GUIDELINES: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: COLORLESS

ODOR: CHARACTERISTIC ODOR

PHYSICAL STATE: LIQUID

pH AS SUPPLIED: 7

pH (Other): N/A

BOILING POINT:

F: 212

C: 100

MELTING POINT: N/A

F: N/A

C: N/A

FREEZING POINT: N/A

F: N/A

C: N/A

VAPOR PRESSURE (mmHg): 17

@

F: 68 DEG

C: 20 DEG

VAPOR DENSITY (AIR = 1): >1

@

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F: N/A
C: N/A

@

F: N/A
C: N/A

EVAPORATION RATE:

BASIS (=1): <1

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

SOLUBILITY IN WATER: COMPLETE

PERCENT SOLIDS BY WEIGHT: N/A

PERCENT VOLATILE: N/A
BY WT/ BY VOL @
F: N/A
C: N/A

VOLATILE ORGANIC COMPOUNDS (VOC): <50 MG/L

WITH WATER: N/A LBS/GAL
WITHOUT WATER: N/A LBS/GAL

MOLECULAR WEIGHT: N/A
VISCOSITY: N/A
@
F: N/A
C: N/A

SECTION 10: STABILITY AND REACTIVITY

STABILITY: PRODUCT IS STABLE UNDER NORMAL HANDLING AND STORAGE CONDITIONS

CONDITIONS TO AVOID (STABILITY): OPEN FLAMES. EXTREME TEMPERATURES.

INCOMPATIBILITY (MATERIAL TO AVOID): STRONG ACIDS, STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: N/A

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.

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RCRA HAZARD CLASS: N/A

SECTION 13: DISPOSAL CONSIDERATIONS (con't)

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: LUMINOX

HAZARD CLASS: NOT REGULATED

ID NUMBER: N/A

PACKING GROUP: N/A

LABEL STATEMENT: N/A

WATER TRANSPORTATION

PROPER SHIPPING NAME:

HAZARD CLASS: SAME

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

AIR TRANSPORTATION

PROPER SHIPPING NAME:

HAZARD CLASS: SAME

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

OTHER AGENCIES:

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): N/A

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): N/A

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): N/A

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: N/A

PREPARATION INFORMATION: N/A

DISCLAIMER: IN COMPLIANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD, 2.9 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.

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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.