

MATERIAL SAFETY DATA SHEET

MSDS DATE:08/15/07

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: HISTO-CLEAR
SYNONYMS: N/A
PRODUCT CODES: 64110-01 THROUGH 64111-10
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: DISTILLED ESSENTIAL OILS-FOOD GRADE
CHEMICAL FAMILY: N/A

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:
DISTILLED ESSENTIAL OILS-FOOD GRADE

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
N/A	100	N/A	
	<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:	N/A	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: INHALATION, INGESTION, SKIN, AND EYES

POTENTIAL HEALTH EFFECTS

EYES: EYE IRRITATION MAY OCCUR WITH EXPOSURE TO CONCENTRATED VAPORS OR CONTACT WITH PRODUCT

SKIN: REPEATED OR PROLONGED CONTACT CAN CAUSE REDNESS, IRRITATION, AND SCALING OF THE SKIN (DERMATITIS).
NORMAL CARE AND PERSONAL HYGIENE SHOULD PREVENT SKIN EFFECTS.

INGESTION: INGESTION MAY CAUSE VOMITING, HEADACHE, AND OTHER MEDICAL PROBLEMS.

INHALATION: INHALATION CAN CAUSE NOSE, THROAT, AND RESPIRATORY TRACT IRRITATION. PROLONGED EXPOSURE TO HIGH VAPOR MIST OR CONCENTRATIONS MAY CAUSE DIZZINESS, HEADACHES, AND NASAL IRRITATION.

ACUTE HEALTH HAZARDS: COMBUSTIBLE LIQUID, ALL MATERIALS IN THIS PRODUCT ARE GRAS (GENERALLY REGARDED AS SAFE). HOWEVER, THIS PRODUCT MAY BE HARMFUL IF SWALLOWED IN SUFFICIENT VOLUME. INGESTION MAY CAUSE VOMITING, HEADACHE, AND OTHER MEDICAL PROBLEMS. THIS PRODUCT MAY BE IRRITATING TO SKIN AND EYES. INHALATION CAN CAUSE NOSE, THROAT AND RESPIRATORY TRACT IRRITATION, COUGHING AND HEADACHE. EXTREMELY OLD OR IMPROPERLY STORED PRODUCT MAY BEGIN TO ACCUMULATE POTENTIALLY SENSITIZING BREAK-DOWN PRODUCTS.

CHRONIC HEALTH HAZARDS: PROLONGED OR REPEATED EXPOSURE CAN CAUSE DRYING DEFATTING AND DERMATITIS OF SKIN.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

CARCINOGENICITY

OSHA: NO ACGIH: NO NTP: NO IARC: NO
OTHER: N/A

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SECTION 4: FIRST AID MEASURES

EYES: REMOVE CONTACT LENSES AT ONCE. IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN: IMMEDIATELY FLUSH WITH PLENTY OF SOAP AND WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. GET MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE. THOROUGHLY CLEAN SHOES BEFORE REUSE.

INGESTION: DO NOT INDUCE VOMITING. IF SWALLOWED AND THE PERSON IS CONSCIOUS, IMMEDIATELY GIVE LARGE AMOUNTS OF WATER. GET MEDICAL ATTENTION.

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

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: 6.1
(% BY VOLUME) **LOWER:** 0.7

FLASH POINT:

F: N/A

C: 49 DEG

METHOD USED: TCC

AUTOIGNITION TEMPERATURE: N/A

F: N/A

C: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: 1

FLAMMABILITY: 2

REACTIVITY: 0

OTHER: N/A

HMIS HAZARD CLASSIFICATION

HEALTH: N/A

FLAMMABILITY: N/A

REACTIVITY: N/A

PROTECTION: N/A

EXTINGUISHING MEDIA: DRY POWDER, FOAM, CARBON DIOXIDE. (WATER MAY BE INEFFECTIVE)

SPECIAL FIRE FIGHTING PROCEDURES: IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN TO NATIONAL DIAGNOSTICS.

HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE CARBON MONOXIDE, CARBON DIOXIDE, AND HYDROCARBONS.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: ELIMINATE SOURCES OF IGNITION. VENTILATE AREA. COVER WITH ABSORBENT MATERIAL (SODA ASH) TO CONFINE SPILL AND SWEEP OR SHOVEL INTO CONTAINER. CLOSE CONTAINER TIGHTLY.

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SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: AVOID CONTACT AND INHALATION. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. WASH THOROUGHLY AFTER HANDLING.

KEEP IN A TIGHTLY CLOSED CONTAINER, STORED IN A COOLED, DRY , WELL VENTILATED AREA AWAY FROM SOURCES OF HEAT OR IGNITION PROTECT FROM PHYSICAL DAMAGE. ISOLATE FROM INCOMPATIBLE MATERIALS.

STORAGE TEMPERATURE: 20° C

OTHER PRECAUTIONS: N/A

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: LOCAL EXHAUSE SHOULD BE ADEQUATE

VENTILATION: LOCAL EXHAUST

RESPIRATORY PROTECTION: NOT EXPECTED TO REQUIRE PERSONAL RESPIRATOR USAGE, BUT IF VAPOR CONCENTRATION BECOMES HIGH, USE APPROVED SELF-CONTAINED AIR MASK.

EYE PROTECTION: SAFETY GLASSES

SKIN PROTECTION: WEAR PROTECTIVE GLOVES AND CLEAN BODY COVERING CLOTHING.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: N/A

EXPOSURE GUIDELINES: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: COLORLESS

ODOR: CITRUS ODOR

PHYSICAL STATE: MOBILE LIQUID

pH AS SUPPLIED: N/A

pH (Other): N/A

BOILING POINT:

F: 355 DEG

C: 179 DEG

MELTING POINT: N/A

F: N/A

C: N/A

FREEZING POINT: N/A

F: N/A

C: N/A

VAPOR PRESSURE (mmHg): 6.0 MM HG

@

F: N/A

C: 25 DEG

VAPOR DENSITY (AIR = 1): 4.94

@

F: N/A

C: N/A

@

F: N/A

C: N/A

EVAPORATION RATE: N/A

BASIS (=1): N/A

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

SOLUBILITY IN WATER: INSOLUBLE

PERCENT SOLIDS BY WEIGHT: N/A

PERCENT VOLATILE: 100
BY WT/ BY VOL @
F: N/A
C: N/A

VOLATILE ORGANIC COMPOUNDS (VOC):

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

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

SECTION 10: STABILITY AND REACTIVITY

STABILITY: STABLE UNDER NORMAL CONDITIONS OF USE

CONDITIONS TO AVOID (STABILITY): HEAT, SOURCES OF IGNITION

INCOMPATIBILITY (MATERIAL TO AVOID): STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

HISTO-CLEAR ORAL RAT LD50 (MG/KG): GRAS (GENERALLY REGARDED AS SAFE)
HISTO-CLEAR DERMAL RABBIT LD50 (MG/KG): GRAS (GENERALLY RETARDED AS SAFE)

COMPONENT CANCER LIST STATUS

<u>COMPONENT</u>	<u>NTP CARCINOGEN</u>		<u>IARC CATERGORY</u>
	<u>KNOWN</u>	<u>ANTICIPATED</u>	
DISTILLED ESSENTIAL OILS-FOOD GRADE	NO	NO	NONE

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

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SECTION 13: DISPOSAL CONSIDERATIONS (con't)

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: TERPENE HYDROCARBONS, N.O.S. (LIMONENE)

HAZARD CLASS: 3

ID NUMBER: UN 2319

PACKING GROUP: III

LABEL STATEMENT: N/A

WATER TRANSPORTATION

PROPER SHIPPING NAME:

SAME

HAZARD CLASS:

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

AIR TRANSPORTATION

PROPER SHIPPING NAME:

SAME

HAZARD CLASS:

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

OTHER AGENCIES: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): ALL INTENTIONAL INGREDIENTS ARE LISTED ON THE TSCA INVENTORY.

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

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

311/312 HAZARD CATEGORIES:

<u>COMPONENT</u>	<u>FIRE</u>	<u>PRESSURE</u>	<u>REACTIVITY</u>	<u>ACUTE</u>	<u>CHRONIC</u>
DISTILLED ESSENTIAL OILS-FOOD GRADE	YES	NO	NO	NO	NO

313 REPORTABLE INGREDIENTS:N/A

STATE REGULATIONS: N/A

INTERNATIONAL REGULATIONS:

EUROPE

ECC REGULATORY:

ALL INTENTIONAL INGREDIENTS ARE LISTED ON THE EUROPEAN EINECS INVENTORY.

R: 10-38: FLAMMABLE. IRRITATING TO SKIN

S: 26-37: IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR SUITABLE GLOVES.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: N/A

PREPARATION INFORMATION: N/A

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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.

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.