

MATERIAL SAFETY DATA SHEET

06/28/2007

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CHROMIC ACID 4%
SYNONYMS: NONE AVAILABLE
PRODUCT CODES: 12557

MANUFACTURER: ELECTRON MICROSCOPY SCIENCES
DIVISION: 1560 INDUSTRY ROAD/P.O. BOX 550
ADDRESS: HATFIELD, PA 19440

EMERGENCY PHONE: 215-412-8400
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CHEMICAL NAME: N/A
CHEMICAL FAMILY: N/A
CHEMICAL FORMULA: AN AQUEOUS SOLUTION OF CHROMIC ACID

PRODUCT USE: IN RESEARCH

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: CHROMIC ACID

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
7738-94-5	4%	4%	
	<u>ppm</u>	<u>mg/m3</u>	
OSHA PEL-TWA:			
OSHA PEL STEL :			
OSHA PEL CEILING:		0.1MG/M3 (CrC03) CEIL	
ACGIH TLV-TWA:		0.05 MG/M3 (CR) TWA	
ACGIH TLV STEL:			
ACGIH TLV CEILING:			

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: MAY BE HARMFUL IF SWALLOWED. MAY BE IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.
CHROMIC ACID IS A CARCINOGEN AND SHOULD BE HANDLED WITH CARE. IT IS ALSO A STRONG OXIDIZER THAT WILL CAUSE TISSUE DAMAGE AND SEVERE ULCERS ON CONTACT WITH SKIN OR EYES.

ROUTES OF ENTRY: ALL

POTENTIAL HEALTH EFFECTS

EYES: EVEN BRIEF CONTACT CAN CAUSE SEVERE DAMAGE.

SKIN: CAN CAUSE BURNS AND ULCERATION

INGESTION: CAN CAUSE SEVERE BURNS TO MOUTH, ESOPHAGUS AND STOMACH. ALSO CAUSES VOMITING, DIARRHEA, ETC.

INHALATION: EXTREMELY CORROSIVE TO MUCOUS MEMBRANCES AND OTHER STRUCTURES IN THE RESPIRATORY TRACT. WILL CAUSE PULMONARY EDEMA

ACUTE HEALTH HAZARDS: UNKNOWN

CHRONIC HEALTH HAZARDS: UNKNOWN

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: UNKNOWN

MATERIAL SAFETY DATA SHEET

06/28/2007

CARCINOGENICITY

IARC: 1

NFPA: HEALTH=3, FLAMMABILITY= 0, REACTIVITY=2

OTHER: IT'S A KNOWN CARCINOGENICITY, IT IS NOT ANTICIPATED.

SECTION 4: FIRST AID MEASURES

EYES: RINSE THOROUGHLY WITH RUNNING WATER. GET IMMEDIATE MEDICAL ATTENTION.

SKIN: WASH AFFECTED AREA WITH SOAP AND WATER. GET IMMEDIATE MEDICAL ATTENTION.

INGESTION: DO NOT INDUCE VOMITING. IF THE VICTIM IS CONSCIOUS ADMINISTER LARGE QUANTITIES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

INHALATION: BECAUSE OF LOW VAPOR PRESSURE, INHALATION IS UNLIKELY TO BE A PROBLEM WITH THIS PRODUCT. IN CASE OF DIFFICULTY, REMOVE FROM SOURCE OF EXPOSURE AND GET IMMEDIATE MEDICAL ATTENTION. BE PREPARED TO ASSIST BREATHING.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: NOT APPLICABLE
(% BY VOLUME) LOWER:

FLASH POINT: NOT APPLICABLE

METHOD USED:

AUTOIGNITION TEMPERATURE: NOT NORMALLY A HAZARD

NFPA HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: REACTIVITY:
OTHER:

HMIS HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: REACTIVITY:
PROTECTION:

EXTINGUISHING MEDIA: ANY MEANS SUITABLE FOR SURROUNDING FIRE.

SPECIAL FIRE FIGHTING PROCEDURES: PYROLYSIS WILL RELEASE CORROSIVE OXIDES OF CHROMIUM.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

HAZARDOUS DECOMPOSITION PRODUCTS:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: ABSORB WITH A SUITABLE ABSORBENT AND STORE IN A SUITABLE CONTAINER FOR DISPOSAL.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: STORE IN A CLOSED CONTAINER, PROTECTED FROM FREEZING.

MATERIAL SAFETY DATA SHEET

06/28/2007

OTHER PRECAUTIONS: NONE

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: NOT APPLICABLE

VENTILATION : USUALLY NOT REQUIRED. WHEN REQUIRED, REFER TO THE ACGIH DOCUMENT, "INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICES" FOR DETAILS ABOUT VENTILATION.

RESPIRATORY PROTECTION: PERSONAL RESPIRATOR USUALLY NOT REQUIRED. IN CASE OF EMERGENCY, OR WHEN EXPOSURE LEVELS ARE UNKNOWN, USE A POSITIVE PRESSURE, FULL FACE PIECE, AIR SUPPLIED RESPIRATOR.

EYE PROTECTION: LABORATORY SAFETY GOGGLES OR SIMILAR PRODUCTS ARE RECOMMENDED AS PART OF GOOD LABORATORY PRACTICE.

SKIN PROTECTION: PROTECTIVE GLOVES ARE RECOMMENDED AS PART OF GOOD LABORATORY PRACTICE.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: WASH HANDS AFTER USE

EXPOSURE GUIDELINES: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: A CLEAR, DARK RED LIQUID

ODOR: N/A

PHYSICAL STATE: LIQUID

pH AS SUPPLIED: N/A

pH (Other):

BOILING POINT: 102°

F:

C:

MELTING POINT: N/A

F:

C:

FREEZING POINT: N/A

F:

C:

VAPOR PRESSURE (mmHg):

@ 18 C: 20°

VAPOR DENSITY (AIR = 1): 0.6

SPECIFIC GRAVITY (H₂O = 1):

@

F:

C:

EVAPORATION RATE: (WATER= 1): 1

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

SOLUBILITY IN WATER: INFINITELY MISCIBLE WITH WATER

MATERIAL SAFETY DATA SHEET

06/28/2007

PERCENT SOLIDS BY WEIGHT: N/A

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

F:
C:

VOLATILE ORGANIC COMPOUNDS (VOC): N/A

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

MOLECULAR WEIGHT: N/A
VISCOSITY:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: FREEZES AT LOW TEMPERATURE

CONDITIONS TO AVOID (STABILITY): EXCESSIVE COLD/HEAT AND LIGHT

INCOMPATIBILITY (MATERIAL TO AVOID): N/A

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: NOTHING UNUSUAL

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: NONE RELATING TO NORMAL EXPOSURE.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: NOT BIODEGRADABLE, TOXIC TO MARINE LIFE.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: LOCAL GOVERNMENTS USUALLY RESTRICT THE AMOUNTS OF CHROMIUM COMPOUNDS THAT BE FLUSHED DOWN DRAIN. INSURE COMPLIANCE WITH ALL GOVERNMENT REGULATION.

RCRA HAZARD CLASS:

SECTION 13: DISPOSAL CONSIDERATIONS (con't)

SECTION 13 NOTES: N/A

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: CHROMIC ACID SOLUTION
HAZARD CLASS: 8
ID NUMBER: UN1755
PACKING GROUP: II
LABEL STATEMENT: CORROSIVE

MATERIAL SAFETY DATA SHEET

06/28/2007

WATER TRANSPORTATION

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

AIR TRANSPORTATION

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

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): YES

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

311/312 HAZARD CATEGORIES: ACUTE: YES, CHRONIC: YES, FIRE: YES

313 REPORTABLE INGREDIENTS: CHROMIC ACID , (CHROMIUM CMPD)

SECTION 16: OTHER INFORMATION

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.