

# MATERIAL SAFETY DATA SHEET

MSDS DATE:08/06/07

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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PRODUCT NAME: SALINE SODIUM CITRATE BUFFER POWDERS  
SYNONYMS: N/A  
PRODUCT CODES: 11490-11492  
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: N/A  
CHEMICAL FAMILY: N/A

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## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

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### INGREDIENT:

SODIUM CHLORIDE  
CITRIC ACID TRISODIUM

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
NONE	N/A	66.53	
NONE	N/A	29.4	
	<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	

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## SECTION 3: HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW: N/A

ROUTES OF ENTRY: N/A

POTENTIAL HEALTH EFFECTS

EYES: N/A

SKIN: N/A

INGESTION: N/A

INHALATION: N/A

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    ACGIH: N/A    NTP: N/A    IARC: N/A  
OTHER: N/A

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## SECTION 4: FIRST AID MEASURES

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EYES: FLUSH WITH WATER FOR 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPERATING THE EYELIDS WITH FINGERS. IF IRRITATION OCCURS, SEEK MEDICAL ATTENTION

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

INGESTION: IF SWALLOWED, WASH OUR MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN

INHALATION: F INHALED, REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT, CALL A PHYSICIAN.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

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## SECTION 5: FIRE-FIGHTING MEASURES

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

FLASH POINT: N/A  
F: N/A  
C: N/A  
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: SUITABLE: NONCOMBUSTIBLE. USE EXTRINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. FOR FIRES INVOLVING THIS MATERIAL, DO NOT ENTER ANY ENCLOSED OR CONFINED FIRE SPACE WITHOUT PROPER EQUIPMENT. THIS MAY INCLUDE SELF CONTAINED BREATHING APPARATUS TO PROTECT AGAINST THE HAZARDOUS EFFECTS OF THE NORMAL PRODUCTS OF COMBUSTION OR OXYGEN DEFICIENCY.

UNUSUAL FIRE AND EXPLOSION HAZARDS: EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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ACCIDENTAL RELEASE MEASURES: EXERCISE APPROPRIATE PRECAUTIONS TO MINIMIZE DIRECT CONTACT WITH SKIN OR EYES AND PREVENT INHALATION OF DUST. SWEEP UP. PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING DUST. VENTILATE AREA AND WASH THE SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE

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## SECTION 7: HANDLING AND STORAGE

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HANDLING AND STORAGE: AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE. KEEP TIGHTLY CLOSED.  
OTHER PRECAUTIONS: N/A

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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ENGINEERING CONTROLS: SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED.

VENTILATION: MECHANICAL EXHAUST REQUIRED

RESPIRATORY PROTECTION: USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU) RESPIRATORY PROTECTION IS NOT REQUIRED. WHERE PROTECTION FROM NUISANCE LEVELS OF DUSTS ARE DESIRED, USE TYPE N95 (US) OR TYPE P1 (EN 143) DUST MASKS.

EYE PROTECTION: CHEMICAL SAFETY GOGGLES

SKIN PROTECTION: PROTECTIVE GLOVES

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: N/A

EXPOSURE GUIDELINES N/A

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE: N/A

ODOR: N/A

PHYSICAL STATE: POWDER

pH AS SUPPLIED: 6.8-7.2

pH (Other): N/A

BOILING POINT: N/A

F: N/A

C: N/A

MELTING POINT: N/A

F: N/A

C: N/A

FREEZING POINT: N/A

F: N/A

C: N/A

VAPOR PRESSURE (mmHg): N/A

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F: N/A

C: N/A

VAPOR DENSITY (AIR = 1): N/A

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F: N/A

C: N/A

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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)

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SOLUBILITY IN WATER: N/A

PERCENT SOLIDS BY WEIGHT: N/A

PERCENT VOLATILE: N/A

BY WT/ BY VOL @

F: N/A

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C: N/A  
VOLATILE ORGANIC COMPOUNDS (VOC): N/A

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

MOLECULAR WEIGHT: N/A  
VISCOSITY: N/A

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F: N/A  
C: N/A

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## SECTION 10: STABILITY AND REACTIVITY

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STABILITY: STABLE

CONDITIONS TO AVOID (STABILITY): N/A

INCOMPATIBILITY (MATERIAL TO AVOID): BASES, REDUCING AGENTS, OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, AND NITROGEN OXIDES, SODIUM OXIDES, ACID CHLORIDES.

HAZARDOUS POLYMERIZATION: WILL NO OCCUR

CONDITIONS TO AVOID (POLYMERIZATION): N/A

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## SECTION 11: TOXICOLOGICAL INFORMATION

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### TOXICOLOGICAL INFORMATION:

SIGNS AND SYMPTOMS OF EXPOSURE: INGESTION OF LARGE AMOUNTS CAUSES VOMITING AND DIARRHEA, DEHYDRATION, AND CONGESTION MAY OCCUR IN INTERNAL ORGANS. HYPERTONIC SALT SOLUTIONS CAN PRODUCE INFLAMMATORY REACTIONS IN THE GASTROINTESTINAL TRACT.

### ROUTES OF EXPOSURE:

SKIN CONTACT: MAY CAUSE SKIN IRRITATION

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN

EYE CONTACT: MAY CAUSE EYE IRRITATION. SODIUM CHLORIDE (NaCl) IN CONTACT WITH EYES CAN CAUSE IRRITATION OR REDNESS DUE TO ABRASION.

INHALATION: MATERIAL MA BE IRRITATING TO MUCOUS MEMBRANES AND UPPE RRESPIRATORY TRACT. MAY BE HARMFUL IF INHALED.

INGESTION: MAY BE HARMFUL IF SWALLOWED

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## SECTION 12: ECOLOGICAL INFORMATION

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ECOLOGICAL INFORMATION: N/A

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## SECTION 13: DISPOSAL CONSIDERATIONS

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

RCRA HAZARD CLASS: N/A

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## SECTION 13: DISPOSAL CONSIDERATIONS (con't)

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CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTER BURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

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## SECTION 14: TRANSPORT INFORMATION

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### U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: SALINE SODIUM CITRATE BUFFER POWDER  
HAZARD CLASS: N/A  
ID NUMBER: N/A  
PACKING GROUP: N/A  
LABEL STATEMENT: NON HAZARDOUS

### 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

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## SECTION 15: REGULATORY INFORMATION

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### 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:

GERMANY WGK: 2  
SELF-CLASSIFICATION

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## SECTION 16: OTHER INFORMATION

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OTHER INFORMATION: N/A

PREPARATION INFORMATION: N/A

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.