

MATERIAL SAFETY DATA SHEET

MSDS DATE:10/20/2007

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SORENSENS PHOSPHATE BUFER, 0.15M
SYNONYMS: N/A
PRODUCT CODES: 11682-05-10
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 -9300

FAX PHONE: 215-412-8450

CHEMICAL NAME: N/A
CHEMICAL FAMILY: N/A

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT:</u>	<u>CAS. NO.</u>	<u>%WT</u>
POTASSIUM PHOSPHATE MONOBASIC	7778-77-0	3-4%
SODIUM PHOSPHATE, DIABASIC	7558-79-4	3-4%
WATER	7732-18-5	92-94%

	<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: WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY AFFECT CENTRAL NERVOUS SYSTEM, KIDNEYS, AND CARDIOVASCULAR SYSTEM.

ROUTES OF ENTRY: INHALATION, INGESTION, SKIN, EYES.

POTENTIAL HEALTH EFFECTS

EYES: CAUSIS IRRITATION, REDNESS, PAIN, AND BLURRED VISION.

SKIN: CAUSES IRRITATION TO SKIN. SYMPTOMS INCLUDE REDNESS, ITCHING , AND PAIN. MAY BE ABSORBED THROUGH THE SKIN WITH POSSIBLE SYSTEMIC EFFECTS.

INGESTION: SODIUM AZIDE IS HIGHLY TOXIC, AFFECTING THE CENTRAL NERVOUS SYSTEM, KIDNEYS, AND CARDIOVASCULAR SYSTEM. DILUTE SOLUTIONS ARE EXPECTED TO BE LESS TOXIC. SYMPTOMS MAY INCLUDE HEADACHE, NAUSEA, VOMITING, DIZZINESS AND GASTROINTESTINAL IRRITATION

INHALATION: CAUSES IRRITATION TO THE RESPIRATORY TRACT. SYMPTOMS MAY INCLUDE COUGHING, SHORTNESS OF BREATH, INHALATION OF CONCENTRATED VAPORS MAY CAUSE HEADACHE, DIZZINESS, AND DROWSINESS.

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

SECTION 4: FIRST AID MEASURES

EYES: FLUSH WITH WATER FOR 15 MINUTES, WHILE LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. SEEK MEDICAL ATTENTION

SKIN: WASH WITH SOAP AND WATER WHILE, REMOVING CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION.

INGESTION: INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.

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

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: ACCIDENTAL INGESTION OF SODIUM AZIDE IS POTENTIALLY LIFE THREATENING. TREATMENT INCLUDES GASTRIC LAVAGE, FOLLOWED BY SALINE CATHARSIS. EKG AND BLOOD PRESSURE MONITORING AND SUPPORT ARE RECOMMENDED.

SECTION 5: FIRE-FIGHTING MEASURES

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: 1 **FLAMMABILITY:** 0 **REACTIVITY:** 0
OTHER: N/A

HMIS HAZARD CLASSIFICATION

HEALTH: 2 **FLAMMABILITY:** 0 **REACTIVITY:** 1
PROTECTION: N/A

EXTINGUISHING MEDIA: USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE.

SPECIAL FIRE FIGHTING PROCEDURES: 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: NOT CONSIDERED TO BE AN EXPLOSION HAZARD

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8. CONTAIN AND RECOVER LIQUID WHEN POSSIBLE. COLLECT LIQUID IN AN APPROPRIATE CONTAINER OR ABSORB WITH AN INERT MATERIAL (E.G. VERMICULITE, DRY SAND, EARTH) AND PLACE IN A CHEMICAL WASTE CONTAINER. DO NOT USE COMBUSTIBLE MATERIALS, SUCH AS SAW DUST. DO NOT FLUSH TO THE SEWER. US REGULATIONS (CERCLA) REQUIRE

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REPORTING SPILLS AND RELEASES TO SOIL, WATER , AND AIR IN EXCESS OF REPORTABLE QUANTITIES. THE TOLL FREE NUMBER FOR THE US COAST GUARD NATIONAL RESPONSE CENTER IS (800) 424- 8802

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE:

KEEP IN A TIGHTLY CLOSED CONTAINER, STORED IN A COOL, DRY, WELL VENTILATED AREA. PROTECT AGAINST PHYSICAL DAMAGE. CAUTION: PRODUCT CONTAINS SODIUM AZIDE AS A PRESERVATIVE. DO NOT ALLOW PRODUCT TO EVAPORATE TO DRYNESS. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (VAPORS, LIQUID); OBSERVE ALL WARNINGS AND PRECAUTIONS LISTED FOR THE PRODUCT.

OTHER PRECAUTIONS: N/A

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

VENTILATION: A SYSTEM OF LOCAL AND/ OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO THE ACGIH DOCUMENT.

RESPIRATORY PROTECTION: IF THE EXPOSURE LIMIT IS EXCEEDED, WEAR A SUPPLIED AIR, FULL-FACEPIECE RESPIRATOR, AIRLINED HOOD, OR FULL-FACEPIECE SELF-CONTAINED BREATHING APPARATUS.

EYE PROTECTION: USE CHEMICAL SAFETY GOGGLES AND/OR FULL FACE SHIELD WHERE SPLASHING IS POSSIBLE. MAINTAIN EYE WASH FOUNTAIN AND QUICK DRENCH FACILITIES IN WORK AREA.

SKIN PROTECTION: WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE, TO PREVEN SKIN CONTACT.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: N/A

EXPOSURE GUIDELINES

FOR SODIUM AZIDE, NaN₃ NOTE: HYDRAZOIC ACID, HN₃, VAPOR IS PRESENT WHERE SODIUM AZIDE IS HANDLED):

-NIOSH RECOMMENDED EXPOSURE LIMIT (REL)-

0.1 PPM AS HN₃ (CEILING), SKIN

0.3 MG/M³ AS NaN (CEILING), SKIN

-ACGIH THRESHOLD LIMIT VALUE (TLV)

0.11 PPM AS HN₃ (CEILING), A4- NOT CLASSIFIABLE AS A HUMAN CARCINOGEN

0.29 MG/M³ AS NaN₃ (CEILING), A4- NOT CLASSIFIABLE AS A HUMAN CARCINOGEN.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: CLEAR, COLORLESS

ODOR: N/A

PHYSICAL STATE: LIQUID

pH AS SUPPLIED: 7.2

pH (Other): N/A

BOILING POINT: N/A

F: N/A

C: N/A

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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

@

F: N/A

C: N/A

VAPOR DENSITY (AIR = 1): N/A

@

F: N/A

C: N/A

@

F: N/A

C: N/A

EVAPORATION RATE: N/A

BASIS (=1): N/A

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

SOLUBILITY IN WATER: COMPLETE

PERCENT SOLIDS BY WEIGHT: 100

PERCENT VOLATILE: 97
BY WT/ BY VOL @

F: 70 DEG

C: 21 DEG

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

@

F: N/A

C: N/A

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 ACIDS AND STRONG OXIDIZERS. FOR SODIUM AZIDE: BENZOYL CHLORIDE+ POTASSIUM HYDROXIDE, BROMINE, CARBON DISULFIDE, CHROMYL CHLORIDE, COPPER, DIBROMALONITRILE, DIMETHYL SULFATE, LEAD, BARIUM CARBONATE, SULFURIC ACID, WATER, AND NITRIC ACID.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: HYDRAZOIC ACID FUMES (EXPLOSION HAZARD), AND OXIDES OF PHOSPHORU, SODIUM AND NITROGEN.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 11: TOXICOLOGICAL INFORMATION

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TOXICOLOGICAL INFORMATION:

FOR SODIUM AZIDE: 27 MG/KG ORAL RAT LD50; 20 MG/KG SKIN RABBIT LD50; INVESTIGATED AS TUMORIGEN AND MUTAGEN.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

FOR SODIUM AZIDE: WHEN RELEASED INTO THE SOIL, THIS MATERIAL IS NOT EXPECTED TO BIODEGRADE. WHEN RELEASED INTO THE SOIL, THIS MATERIAL IS EXPECTED TO LEACH INTO GROUNDWATER. WHEN RELEASED INTO THE AIR, THIS MATERIAL MAY BE MODERATELY DEGRADED BY PHOTOLYSIS.

ENVIRONMENTAL TOXICITY:

FOR SODIUM AZIDE: DANGEROUS TO THE ENVIRONMENT. VERY TOXIC TO AQUATIC ORGANISMS: MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

SECTION 13: DISPOSAL CONSIDERATIONS

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

RCRA HAZARD CLASS: N/A

SECTION 13: DISPOSAL CONSIDERATIONS (con't)

WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE HANDLED AS HAZARDOUS WASTE AND SENT TO A RCRA APPROVED WASTE FACILITY. PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE AND LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS. DISPOSE OF CONTAINER AND UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME:	NOT REGULATED
HAZARD CLASS:	
ID NUMBER:	
PACKING GROUP:	
LABEL STATEMENT:	

WATER TRANSPORTATION

PROPER SHIPPING NAME:	NOT REGULATED
HAZARD CLASS:	
ID NUMBER:	
PACKING GROUP:	
LABEL STATEMENTS:	

AIR TRANSPORTATION

PROPER SHIPPING NAME:	NOT REGULATED
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):

INGREDIENT
POTASSIUM PHOSPHATE MONOBASIC

TSCA-8 (d)
NO

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SODIUM PHOPHATE, DIABASIC	NO
SODIUM AZIDE	NO
WATER	NO

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):

<u>INGREDIENT</u>	<u>CERCLA</u>
POTASSIUM PHOSPHATE MONOBASIC	NO
SODIUM PHOSPHATE, DIABASIC	5000
SODIUM AZIDE	1000
WATER	NO

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

<u>INGREDIENT</u>	<u>RQ</u>	<u>TPQ</u>	<u>LIST</u>
POTASSIUM PHOSPHATE MONOBASIC	NO	NO	NO
SODIUM PHOSPHATE DIABASIC	NO	NO	NO
SODIUM AZIDE	1000	500	YES
WATER	NO	NO	NO

311/312 HAZARD CATEGORIES: ACUTE: YES
313 REPORTABLE INGREDIENTS: NONE

CHRONIC: NO

FIRE: NO

PRESSURE: NO

REACTIVITY: NO

STATE REGULATIONS: N/A

INTERNATIONAL REGULATIONS: N/A

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

LABEL PRECAUTIONS:

WASH THOROUGHLY AFTER HANDLING.
AVOID CONTACT WITH EYES, SKIN, AND CLOTHING
AVOID BREATHING VAPOR OR MIST.
KEEP CONTAINER CLOSED.
USE ONLY WITH ADEQUATE VENTILATION

PRODUCT USE; LABORATORY REAGENT

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.