

MATERIAL SAFETY DATA SHEET

MSDS DATE:08/14/07

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: KODAK DEVELOPER SYSTEM CLEANER AND NEUTRALIZER, NEUTRALIZER

SYNONYMS: KAN 965714; PCD 5812; S-0160.200

PRODUCT CODES: 74270-01

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: N/A

CHEMICAL FAMILY: N/A

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

CONCENTRATE:

WATER

SODIUM BISULFITE

SODIUM SULFITE

SODIUM CITRATE

WORKING SOLUTION:

WATER

SODIUM BISULFITE

SODIUM SULFITE

SODIUM CITRATE

| <u>CAS NO.</u> | <u>% WT</u> | <u>% VOL</u> | <u>SARA 313 REPORTABLE</u> |
|--------------------|-------------|--------------|----------------------------|
| - | | | |
| 007732-18-5 | 70-75 | N/A | |
| 007631-90-5 | 15-20 | N/A | |
| 007757-83-7 | 5-10 | N/A | |
| 000068-04-2 | <1 | N/A | |
| - | | | |
| 007732-18-5 | 95-100 | N/A | |
| 007631-90-5 | 1-5 | N/A | |
| 007757-83-7 | 1-5 | N/A | |
| 000068-04-2 | <1 | 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: WARNING! MAY BE HARMFUL IF SWALLOWED. CAUSES SKIN AND EYE IRRITATION

ROUTES OF ENTRY: INHALATION, EYES, SKIN, INGESTION

POTENTIAL HEALTH EFFECTS

EYES: CONCENTRATE: CAUSES IRRITATION
WORKING SOLUTION: NO SPECIFIC HAZARD KNOWN. MAY CAUSE TRANSIENT IRRITATION.

SKIN: CONCENTRATE: CAUSES IRRITATION. THIS MATERIAL HAS A LOW POTENTIAL TO CAUSE ALLERGIC SKIN REACTIONS; HOWEVER, CASES OF HUMAN SKIN SENSITIZATION HAVE BEEN REPORTED.
WORKING SOLUTION: THIS MATERIAL HAS A LOW POTENTIAL TO CAUSE ALLERGIC SKIN REACTIONS; HOWEVER, CASES OF HUMAN SKIN SENSITIZATION HAVE BEEN REPORTED.

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INGESTION: CONCENTRATE: MAY BE HARMFUL IF SWALLOWED. SOME ASTHMATICS OR SULFITE-SENSITIVE INDIVIDUALS MAY EXPERIENCE WHEEZING, CHEST TIGHTNESS, STOMACH UPSET, HIVES, FAINTNESS, WEAKNESS AND DIARRHEA. MAY CAUSE IRRITATION OF THE GASTROINTESTINAL TRACT IF SWALLOWED.
WORKING SOLUTION: MAY BE HARMFUL IF SWALLOWED. SOME ASTHMATICS OR SULFITE-SENSITIVE INDIVIDUALS MAY EXPERIENCE WHEEZING, CHEST TIGHTNESS, STOMACH UPSET, HIVES, FAINTNESS, WEAKNESS AND DIARRHEA.

INHALATION: EXPECTED TO BE A LOW HAZARD FOR USUAL INDUSTRIAL OR COMMERCIAL HANDLING BY TRAINED PERSONNEL. IN CONTACT WITH STRONG ACIDS OR IF HEATED, SULFITES MAY LIBERATE SULFUR DIOXIDE GAS. SULFUR DIOXIDE GAS IS IRRITATING TO THE RESPIRATORY TRACT. SOME ASTHMATICS OR HYPERSENSITIVE INDIVIDUALS MAY EXPERIENCE DIFFICULT BREATHING.

ACUTE HEALTH HAZARDS: N/A

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

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. IF IRRITATION OCCURS, SEEK MEDICAL ATTENTION

SKIN: WASH WITH SOAP AND WATER WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CONTAMINATED CLOTHING BEFORE REUSE. DESTROY OR THOROUGHLY CLEAN CONTAMINATED SHOES. IF IRRITATION OCCURS, SEEK MEDICAL ATTENTION.

INGESTION: DRINK 1-2 GLASSES OF WATER. SEEK MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

INHALATION: IF SYMPTOMATIC, MOVE TO FRESH AIR. TREAT SYMPTOMATICALLY. GET MEDICAL ATTENTION IF SYMPTOMS PERSIST.

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: NONE (NON COMBUSTIBLE LIQUID)

F:

C:

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: 1 FLAMMABILITY: 0 REACTIVITY: 0
PROTECTION: B

EXTINGUISHING MEDIA: USE APPROPRIATE AGENT FOR ADJACENT FIRE.

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SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING. FIRE OR EXCESSIVE HEAT MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

HAZARDOUS DECOMPOSITION PRODUCTS: NONE

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: FLUSH TO SEWER WITH LARGE AMOUNTS OF WATER. OTHERWISE, ABSORB SPILL WITH VERMICULITE OR OTHER INERT MATERIAL, THEN PLACE IN A CONTAINER FOR CHEMICAL WASTE. CLEAN SURFACE THOROUGHLY TO REMOVE RESIDUAL CONTAMINATION.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: AVOID BREATHING MIST OF VAPOR. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.
CONCENTRATE: KEEP CONTAINER CLOSED. KEEP AWAY FROM INCOMPATIBLE SUBSTANCES.
WORKING SOLUTION: KEEP CONTAINER CLOSED.

OTHER PRECAUTIONS: N/A

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

VENTILATION: GOOD GENERAL VENTILATION (TYPICALLY 10 AIR CHANGES PER HOUR) SHOULD BE USED. VENTILATION RATES SHOULD BE MATCHED TO CONDITIONS.

RESPIRATORY PROTECTION: NONE SHOULD BE NEEDED. A RESPIRATOR SHOULD BE WORN IF HAZARDOUS DECOMPOSITION PRODUCTS ARE LIKELY TO BE OR HAVE BEEN RELEASED.

RESPIRATOR TYPE: ACID GAS. SEE STABILITY AND REACTIVITY SECTION. IF RESPIRATORS ARE USED, A PROGRAM SHOULD BE INSTITUTED TO ASSURE COMPLIANCE WITH OSHA STANDARD 29 CFR 1910.134.

EYE PROTECTION: WEAR SAFETY GLASSES WITH SIDE SHIELDS (OR GOGGLES).

SKIN PROTECTION: WEAR IMPERVIOUS GLOVES AND PROTECTIVE CLOTHING APPROPRIATE FOR THE RISK OF EXPOSURE.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: EYE BATH, SAFETY SHOWER, WASHING FACILITIES.

WORK HYGIENIC PRACTICES: N/A

EXPOSURE GUIDELINES: LIMITS:

ACGIH THRESHOLD LIMIT VALUE (TLV):
SODIUM BISULFATE: 5 MG/M³ TWA

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: COLORLESS

ODOR: ODORLESS

PHYSICAL STATE: LIQUID

pH AS SUPPLIED: CONCENTRATE: 5.7

WORKING SOLUTION:6.3

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pH (Other): N/A

BOILING POINT:

F: > 212 DEG

C: > 100 DEG

MELTING POINT:N/A

F: N/A

C: N/A

FREEZING POINT: N/A

F: N/A

C: N/A

VAPOR PRESSURE (mmHg): 24 MBAR (18 MM HG)

@

F: 68 DEG

C: 20 DEG

VAPOR DENSITY (AIR = 1): 0.6

@

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: N/A

PERCENT VOLATILE: N/A

BY WT/ BY VOL @

F: N/A

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

@

F: N/A

C: N/A

SECTION 10: STABILITY AND REACTIVITY

STABILITY: STABLE

CONDITIONS TO AVOID (STABILITY):

INCOMPATIBILITY (MATERIAL TO AVOID): CONCENTRATE: STRONG ACIDS
WORKING SOLUTION: NONE WITH COMMON MATERIALS AND CONTAMINANTS
WITH WHICH THE MATERIAL MAY REASONABLY COME INTO CONTACT.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: SULFUR DIOXIDE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID (POLYMERIZATION): N/A

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SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

- EYES:** CONCENTRATE: CAUSES IRRITATION
WORKING SOLUTION: NO SPECIFIC HAZARD KNOWN. MAY CAUSE TRANSIENT IRRITATION.
- SKIN:** CONCENTRATE: CAUSES IRRITATION. THIS MATERIAL HAS A LOW POTENTIAL TO CAUSE ALLERGIC SKIN REACTIONS; HOWEVER, CASES OF HUMAN SKIN SENSITIZATION HAVE BEEN REPORTED.
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- INHALATION:** EXPECTED TO BE A LOW HAZARD FOR USUAL INDUSTRIAL OR COMMERCIAL HANDLING BY TRAINED PERSONNEL. IN CONTACT WITH STRONG ACIDS OR IF HEATED, SULFITES MAY LIBERATE SULFUR DIOXIDE GAS. SULFUR DIOXIDE GAS IS IRRITATING TO THE RESPIRATORY TRACT. SOME ASTHMATICS OR HYPERSENSITIVE INDIVIDUALS MAY EXPERIENCE DIFFICULT BREATHING.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: THE FOLLOWING PROPERTIES ARE ESTIMATED FROM THE COMPONENTS OF THE PREPARATIONS.

| <u>POTENTIAL TOXICITY</u> | <u>CONCENTRATE</u> | <u>WORKING SOLUTION</u> |
|---|--------------------|-------------------------|
| FISH LC50 MG/L: | > 100 | > 100 |
| DAPHNID EC50 MG/L: | > 100 | > 100 |
| ALGAL IC50 MG/L: | > 100 | > 100 |
| ORGANICS READILY DEGRADABLE (> 70%): | YES (7 DAYS) | YES (7 DAYS) |
| POTENTIAL BIOACCUMULATION: | LOG POW < 1 | LOG POW <1 |
| COD (APPROXIMATE G/L): | 51 | 5 |
| BOD5 (APPROXIMATE G/L) | 51 | 5 |
| WASTE TREATMENT MICROORGANISMS EC50 (MG/L): | > 100 | > 100 |

SECTION 13: DISPOSAL CONSIDERATIONS

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

RCRA HAZARD CLASS: N/A

SECTION 13: DISPOSAL CONSIDERATIONS (con't)

DISCHARGE, TREATMENT, OR DISPOSAL MAY BE SUBJECT TO NATIONAL, STATE, OR LOCAL LAWS. FLUSH TO SEWER WITH LARGE AMOUNTS OF WATER.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME:
HAZARD CLASS:
ID NUMBER:
PACKING GROUP:
LABEL STATEMENT:

FOR TRANSPORT INFORMATION REGARDING THIS PRODUCT CALL THE KODAK WORLDWIDE TRANSPORTATION HAZMAT HOT LINE: (716) 22-2400 BETWEEN 8 a.m. AND 5 p.m. (EASTERN STANDARD TIME), MONDAY THROUGH FRIDAY.

WATER TRANSPORTATION

PROPER SHIPPING NAME:
HAZARD CLASS:
ID NUMBER:
PACKING GROUP:

SAME

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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): N/A

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

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): NONE

311/312 HAZARD CATEGORIES: NONE

313 REPORTABLE INGREDIENTS: NONE

STATE REGULATIONS:

MATERIALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER: NONE

MATERIALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE ADVERSDE REPRODUCTIVE EFFECTS: NONE

CARCINOGENICITY CLASSIFICATION (COMPONENTS PRESENT AT 0.1 % OR MORE):

-INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC): NONE

-AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGEINISTS (ACGIH): SODIUM BISULFITE, A4, NOT CLASSIFIABLE AS A HUMAN CARCINOGEN.

- NATIONAL TOXICOLOGY PROGRAM (NTP): NONE

-OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA): NONE

INTERNATIONAL REGULATIONS: N/A

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

US/CANADIAN LABEL STATEMENTS

CONCENTRATE:

CONTAINS SODIUM BISULFITE; SODIUM SULFITE

WARNING! MAY BE HARMFUL IF SWALLOWED. CAUSES IRRITATION

AVOID BREATHING MIST OR VAPOR. AVOID CONTACT WITH EYES SKIN AND CLOTHING. USE WITH ADEQUATE VENTILATION.

WASH THOROUGHLY AFTER HANDLING.

FIRST AID: IF SWALLOWED, SEEK MEDICAL ADVICE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IN

CASE OF CONTACT, IMMEDIATELY FLUSH EYES AND SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE

REMOVING CONTAMINATED CLOTHING AND SHOES. GET MEDICAL ATTENTION IF SYMPTOMS OCCUR. WASH CONTAMINATED

CLOTHING BEFORE REUSE. DESTROY OR THOROUGHLY CLEAN CONTAMINATED SHOES.

KEEP OUT OF REACH OF CHILDREN.

WORKING SOLUTION:

CONTAINS SODIUM BISULFITE; SODIUM SULFITE

WARNING! MAY BE HARMFUL IF SWALLOWED

AVOID BREATHING MIST OR VAPOR. AVOID CONTACT WITH EYES AND PROLONGED OR REPEATED CONTACT WITH SKIN. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.

FIRST AID: IF SWALLOWED, SEEK MEDICAL ADVICE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

KEEP OUT OF REACH OF CHILDREN.

PREPARATION INFORMATION:

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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.