

EASTMAN KODAK COMPANY -- 832 4329, KODAK 3001 FIXER -- 6750-01-360-5172

===== Product Identification =====

Product ID:832 4329, KODAK 3001 FIXER

MSDS Date:09/15/2000

FSC:6750

NIIN:01-360-5172

Status Code:A

MSDS Number: CLDVQ

=== Responsible Party ===

Company Name:EASTMAN KODAK COMPANY

Address:343 STATE STREET

City:ROCHESTER

State:NY

ZIP:14650

Country:US

Info Phone Num:716-477-3194 MSDS :800- 242-2
424

Emergency Phone Num:716-722-5151

Preparer's Name:NOT PROVIDED

CAGE:19139

=== Contractor Identification ===

Company Name:EASTMAN KODAK CO GOVERNMENT MARKETS CONTRACTS

Address:343 STATE ST

Box:City:ROCHESTER

State:NY

ZIP:14650-1115

Country:US

Phone:716-722-5151/(800) 242-2424

CAGE:19139

===== Composition/Information on Ingredients =====

Ingred Name:WATER

CAS:7732-18-5

RTECS #:ZC0110000

Minumum % Wt:65.

Maxumum % Wt:70.

Other REC Limits:NOT PROVIDED

Code:F

Code:F

Ingred Nam

e:AMMONIUM THIOSULFATE
CAS:7783-18-8
RTECS #:XN6465000
= Wt:18.
Other REC Limits:NOT PROVIDED
OSHA PEL:NOT PROVIDED
ACGIH TLV:NOT PROVIDED

Ingred Name:AMMONIUM THIOCYANATE
CAS:1762-95-4
RTECS #:XK7875000
= Wt:10.
Other REC Limits:NOT PROVIDED
OSHA PEL:NOT PROVIDED
ACGIH TLV:NOT PROVIDED
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:ACETIC ACID
CAS:64-19-7
RTECS #:AF1225000
Minumum % Wt:1.
Maxumum % Wt:5.
Other REC Limits:NOT PROVIDED
OSHA PEL:10 PPM
ACGIH TLV:10 PPM
ACGIH STEL:15 PPM
E
PA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:AMMONIUM BISULFITE
CAS:10192-30-0
RTECS #:WT3595000
= Wt:1.
Other REC Limits:NOT PROVIDED
OSHA PEL:NOT PROVIDED
ACGIH TLV:NOT PROVIDED
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:SODIUM TETRABORATE
CAS:1330-43-4
RTECS #:ED4588000
< Wt:1.
Other REC Limits:NOT PROVIDED
OSHA PEL:NOT PROVIDED
ACGIH TLV:1 MG/M3

Ingred Name:SODIUM BISULFITE
CAS:7631-90-5
RTECS #:VZ2000000
< Wt:1.
Other REC Limits:NOT PROVIDED
OSHA PEL:NOT PROVIDED

ACGIH TLV:5 MG/M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

===== Hazards Identification =====

LD50 LC50 Mixture:NOT PROVIDED

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:INHALATION: EXPECTED TO BE A LOW HAZARD FOR RECOMMENDED HANDLING. IF HYDROGEN CYANIDE GAS IS LIBERATED, MAY CAUSE DIZZINESS, HEADACHE, RAPID RESPIRATION, RAPID PULSE, UNCONSCIOUSNESS, CONVULSIONS AND DEATH. IN CONTACT WITH STRONG ACID

S/IF HEATED, SULFITES MAY LIBERATE SULFUR DIOXIDE GAS WHICH IS IRRITATING TO RESPIRATORY TRACT. EYES: CAUSES IRRITATION. SKIN: CAUSES IRRITATION. HARMFUL IF ABSORBED THROUGH SKIN. THIS MATERIAL HAS A LOW POTENTIAL TO CAUSE ALLERGIC SKIN REACTIONS; HOWEVER, CASES OF HUMAN SKIN SENSITIZATION HAVE BEEN REPORTED. INGESTION: HARMFUL IF SWALLOWED. MAY CAUSE IRRITATION OF THE GASTROINTESTINAL TRACT.

Explanation of Carcinogenicity:CARCINOGENICITY CLASSIFICATION (COMPONENTS

PRESENT AT 0.1% OR MORE): - INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC): NONE - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH): NONE - NATIONAL TOXICOLOGY PROGRAM (NTP): NONE - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA): NONE

Effects of Overexposure:INHALATION: IF HYDROGEN CYANIDE GAS IS LIBERATED, MAY CAUSE DIZZINESS, HEADACHE, RAPID RESPIRATION, RAPID PULSE, UNCONSCIOUSNESS, CONVULSIONS AND DEATH. IN CONTACT WITH STRONG ACIDS/IF

HEATED, SULFITE S MAY LIBERATE SULFUR DIOXIDE GAS WHICH IS IRRITATING TO RESPIRATORY TRACT. EYES: CAUSES IRRITATION. SKIN: CAUSES IRRITATION. INGESTION: MAY CAUSE IRRITATION OF THE GASTROINTESTINAL TRACT.

Medical Cond Aggravated by Exposure:SOME ASTHMATICS, HYPERSENSITIVE OR SULFITE-SENSITIVE INDIVIDUALS MAY EXPERIENCE DIFFICULT BREATHING, WHEEZING, CHEST TIGHTNESS, STOMACH UPSET, HIVES, FAINTNESS, WEAKNESS AND DIARRHEA.

===== First Aid Measures =====

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First Aid:INHALATION: MOVE TO FRESH AIR. TREAT SYMPTOMATICALLY. GET MEDICAL ATTENTION IF SYMPTOMS OCCUR. EYES: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IF SYMPTOMS OCCUR. SKIN: IMMEDIATELY FLUSH 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.
INGESTION: INDUCE VOMITING AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

===== Fire Fighting Measures =====

Flash Point:NONE
Extinguishing Media:WATER SPRAY, CARBON DIOXIDE, (CO2); DRY CHEMICAL, ALCOHOL FOAM.
Fire Fighting Procedures:WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING. FIRE OR EXCESSIVE HEAT MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS.
Unusual Fire/Explosion Hazard:SOLUTION CONTAINS A STRONG REDUCING AGENT. DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT.

===== Accidental Release Measures =====

Spill Release Procedures:FLUSH TO SEWER WITH LARGE AMOUNT 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.
Neutralizing Agent:NOT PROVIDED

===== Handling and Storage =====

Handling and Storage Precautions:KEEP CONTAINER TIGHTLY CLOSED TO PREVENT THE LOSS OF WATER. KEEP AWAY FROM INCOMPATIBLE SUBSTANCES. KEEP FROM CONTACT WITH OXIDIZING MATERIALS, HIGHLY OXYGENATED OR HALOGENATED SOLVENTS, ORGANIC COMPOUNDS CONTAINING REDUCIBLE FUNCTIONAL GROUPS.
Other Precautions:IF ACCIDENTALLY MIXED WITH A STRONG OXIDIZER OR ACID, DO NOT BREATHE GAS. AVOID CONTACT WITH E

YES, SKIN, AND CLOTHING.

AVOID BREATHING VAPOR AT CONCENTRATIONS GREATER THAN THE EXPOSURE LIMITS. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.

===== Exposure Controls/Personal Protection =====

Respiratory Protection: IF ENGINEERING CONTROLS DO NOT MAINTAIN AIRBORNE CONCENTRATIONS BELOW LIMITS, APPROVED RESPIRATOR MUST BE WORN.

RESPIRATOR: ACID GAS. IN EVENT THAT HAZARDOUS DECOMPOSITION PRODUCTS RELEASED, EMERGENCY RESPONSE PERSONNEL

MUST WEAR

FULL-FACE POSITIVE-PRESSURE AIR SUPPLIED RESPIRATOR. IF RESPIRATORS USED, ASSURE COMPLIANCE WITH OSHA STANDARD 29 CFR 1910.134.

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

Protective Gloves: WEAR IMPERVIOUS GLOVES AND PROTECTIVE CLOTHING APPROPRIATE FOR RISK OF EXPOSURE

Eye Protection: WEAR SAFETY GLASSES WITH SIDE SHIELDS (OR GOGGLES).

Other Protective Equipment: EYE BATH, WASHING FACILITIES, SAFETY SHOWER.

Work Hygienic Practices: NOT PROVIDED

Supplemental Safety and Health

SUPPLEMENTARY LOCAL EXHAUST VENTILATION, CLOSED SYSTEMS, OR RESPIRATORY PROTECTION MAY BE NEEDED IN SPECIAL CIRCUMSTANCES SUCH AS POORLY VENTILATED SPACES, EVAPORATION FROM LARGE SURFACES, SPRAYING, HEATING, ETC.

===== Physical/Chemical Properties =====

HCC: C3

NRC/State Lic Num: NOT RELEVANT

Boiling Pt: >100.C, 212.F

Melt/Freeze Pt: M.P/F.P Text: NOT PROVIDED

Decomp Temp: Decomp Text: NOT PROVIDED

Vapor Pres: 68F: 24MBAR (18 MM HG)

Vapor Density: 0.6

Spec Gravity: 1.15

pH: 4.9

Viscosity: NOT PROVIDED

Evaporation Rate & Reference: NOT PROVIDED

Solubility in Water: COMPLETE

Appearance and Odor: COLORLESS LIQUID, VINEGAR ODOR.

Percent Volatiles by Volume: 65-70 WT

Corrosion Rate: NOT PROVIDED

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid: YES

BASES, STRONG OXIDIZING AGENTS (E.G. SODIUM HYPOCHLORATE)

ORITE (BLEACH)),
STRONG ACIDS (E.G. SULFURIC ACID), COMBUSTIBLE MATERIAL,
HALOGENATED MATERIALS, AQUEOUS AMMONIA.

Stability Condition to Avoid:NOT PROVIDED

Hazardous Decomposition Products:CYANIDES, CARBONYL SULFIDE,
CHLORAMINE, AMMONIA. CARBON DIOXIDE, CARBON MONOXIDE, OXIDES OF
NITROGEN, OXIDES OF SULFUR.

===== Toxicological Information =====

Toxicological Information:INHALATION: EXPECTED TO BE A LOW HAZARD FOR
RECOMMENDED HANDLING. IF HYDROGE
N CYANIDE GAS IS LIBERATED, MAY
CAUSE DIZZINESS, HEADACHE, RAPID RESPIRATION, RAPID PULSE,
UNCONSCIOUSNESS, CONVULSIONS AND DEATH. IN CONTACT WITH STRONG
ACIDS/IF HEATED, SULFITES MAY LIBERATE SULFUR DIOXIDE GAS WHICH IS
IRRITATING TO RESPIRATORY TRACT. EYES: CAUSES IRRITATION. SKIN:
CAUSES IRRITATION. HARMFUL IF ABSORBED THROUGH SKIN. THIS MATERIAL
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NGESTION:
HARMFUL IF SWALLOWED. MAY CAUSE IRRITATION O F THE GASTROINTESTINAL
TRACT.

===== Ecological Information =====

Ecological:THE FOLLOWING PROPERTIES ARE ESTIMATED FROM THE COMPONENTS
OF THE PREPARATIONS. POTENTIAL TOXICITY: FISH LC50 MG/L: >100.
DAPHNID EC50 MG/L: >100. ALGAL IC50 MG/L: >100. ORGANICS
READILY DEGRAD ABLE (>70%): YES (7 DAYS). POTENTIAL
BIOACCUMULATION: LOG POW 100.

===== Disposal Considerat
ions =====

Waste Disposal Methods:DISCHARGE, TREATMENT, OR DISPOSAL MAY BE SUBJECT
TO NATIONAL, STATE, OR LOCAL LAWS. FLUSH TO SEWER WITH LARGE AMOUNT
OF WATER. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUE, FOLLOW
LABEL WARNINGS EV EN AFTER CONTAINER IS EMPTIED.

===== MSDS Transport Information =====

Transport Information:FOR TRANSPORTATION INFORMATION REGARDING THIS
PRODUCT CALL THE KODAK WORLDWIDE TRANSPORTATION HAZMAT HOT LI

NE:

(716) 722-2400 BETWEEN 8 A.M. AND 5 P.M. (EASTERN STANDARD TIME),
MONDAY THROUGH FRIDAY .

===== Regulatory Information =====

SARA Title III Information:CHEMICAL(S) SUBJECT TO THE REPORTING
REQUIREMENTS OF SECTION 313 OR TITLE III OF THE SUPERFUND
AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 AND 40 CFR
PART 372: AMMONIUM THIOCYANATE; AMMONIUM THIOSULFATE; AMMONIUM
BISULFITE

Federal Regulatory Information:NOT PROVIDED

State Regulatory Information:MATERIAL(S) KNOWN TO THE STATE OF
CALIFORNIA TO CAUSE CANCER: NONE - MATERIAL(S) KNOWN TO THE STATE
OF CALIFORNIA TO CAUSE ADVERSE REPRODUCTIVE EFFECTS: NONE

===== Other Information =====

Disclaimer (provided with this information by the compiling agencies):

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