

EASTMAN KODAK COMPANY -- 190 2485, CONC, KODAK GBX FIXER AND REPLENISHER --
6525-01-152-7619

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

Product ID:190 2485, CONC, KODAK GBX FIXER AND REPLENISHER

MSDS Date:10/26/2000

FSC:6525

NIIN:01-152-7619

Status Code:A

MSDS Number: CLDQR

=== Responsible Party ===

Company Name:EASTMAN KODAK COMPANY

Address:343 STATE STREET

City:ROCHESTER

State:NY

ZIP:14650

Country:US

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Info Phone Num:716-477-3194 MSDS :800- 242-2424

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

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

Ingred Name:WATER

CAS:7732-18-5

RTECS #:ZC0110000

Minimum % Wt:45.

Maximum % Wt:50.

Other REC Li

mits:NOT PROVIDED

Code:F

Code:F

Ingred Name:AMMONIUM THIOSULFATE

CAS:7783-18-8

RTECS #:XN6465000

= Wt:39.

Other REC Limits:NOT PROVIDED

OSHA PEL:NOT PROVIDED

ACGIH TLV:NOT PROVIDED

Ingred Name:SODIUM BISULFITE

CAS:7631-90-5

RTECS #:VZ2000000

Minumum % Wt:1.

Maxumum % Wt:5.

Other REC Limits:NOT PROVIDED

ACGIH TLV:5 MG/M3

EPA Rpt Qty:5000 LBS

DOT Rpt Qty:5000 LBS

Ingred Name:AMMONIUM BISULFITE

CAS:10192-30-0

RTECS #:WT3595000

= Wt:2.

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:POTASSIUM ACETATE

CAS:127-08-2

RTECS #:AJ3325000

Minumum % Wt:1.

Maxumum % Wt:5.

Other REC Limits:NOT PROVIDED

OSHA PEL:NOT PROVIDED

ACGIH TLV:NOT PROVIDED

Ingred Name:ALUMINUM SULFATE

CAS:10043-01-3

RTECS #:BD1700000

Minumum % Wt:1.

Maxumum % Wt:5.

Other REC Limits:NOT PROVIDED

OSHA PEL:NOT PROVIDED

ACGIH TLV:NOT PROVIDED

EPA Rpt Qty:5000 LBS

DOT Rpt Qty:5000 LBS

==== Hazards Identification =====

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LD50 LC50 Mixture:NOT PROVIDED

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

Health Hazards Acute and Chronic:EFFECTS OF EXPOSURE: 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.

EYES: CAUSES IRRITATION. SKIN: CAUSES IRRITATION. THIS MATERIAL HAS A LOW POTENTIAL TO CAUSE ALLERGIC SKIN REACTIONS; HOWEVER, CASES OF HUMAN SKIN SENSITIZATION HAVE BEEN REPORTED. INGESTION: MAY BE HARMFUL IF SWALLOWED.

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 TO

XICOLOGY PROGRAM (NTP): NONE - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA): NONE

Effects of Overexposure:INHALATION: 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. EYES: CAUSES IRRITATION. SKIN: CAUSES IRRITATION.

Medical Cond Aggravated by Exposure:SOME ASTHMATICS, HYPERSENSITIVE OR SU

LFITE-SENSITIVE INDIVIDUALS MAY EXPERIENCE DIFFICULT BREATHING, WHEEZING, CHEST TIGHTNESS, STOMACH UPSET, HIVES, FAINTNESS, WEAKNESS AND DIARRHEA.

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

First Aid:INHALATION: IF SYMPTOMATIC, MOVE TO FRESH AIR. TREAT SYMPTOMATICALLY. GET MEDICAL ATTENTION IF SYMPTOMS PERSIST. 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 PERSIST. WASH CONTAMINATED CLOTHING BEFORE REUSE. DESTROY OR THOROUGHLY CLEAN CONTAMINATED SHOES. INGESTION: DRINK 1-2 GLASSES OF WATER. SEEK MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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

Flash Point:NONE

Extinguishing Media:FLOOD WITH WATER.

Fire Fighting

ting 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, TH

EN PLACE IN A CONTAINER FOR CHEMICAL WASTE. CLEAN SURFACE THOROUGHLY TO REMOVE RESIDUAL C ONTAMINATION. COLLECT IN A NONCOMBUSTIBLE CONTAINER FOR PROMPT DISPOSAL.

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. DO NOT STORE OR SHIP TOGETHER WITH COMBUSTIBLE MATERIAL. STORE IN ORIGINAL CONTAIN

ER. REMOVE AND WAS H CONTAMINATED CLOTHING PROMPTLY.

Other Precautions:AVOID BREATHING MIST OR VAPOR. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING. KEEP AWAY FROM COMBUSTIBLE MATERIAL. KEEP FROM CONTACT WITH OXIDIZING MATERIALS, HIGHLY OXYGENATED OR HALOGENATED SOLVENTS, ORGANIC COMPOUNDS CONTAINING REDUCIB LE FUNCTIONAL GROUPS

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

Respiratory P

rotection: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 RESPI RATORS ARE USED, A PROGRAM SHOULD BE INSTITUTED TO 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:WE

AR 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

ABBREVIATION: N/A = NOT APPLICABLE. N/AV = NOT AVAILABLE. N/K =

UNKNOWN. N/P = NOT PROVIDED. N/R = NOT RELEVANT. N/D = NOT

DETERMINED. N/E = NOT ESTABLISHED. CNS = CENTRAL NERVOUS SYSTEM. GI
= GASTROI

NTESTINAL. SCBA = SELF CONTAINED BREATHING APPARATUS.

===== 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:1.297

pH:4.9

Viscosity:NOT PROVIDED

Evaporation Rate & Reference:NOT PROVIDED

Solubility in Water:COMPLETE

Appearance and Odor:COLORLESS LIQUID, AMMONIA ODOR

Percen

t Volatiles by Volume:48 WT

Corrosion Rate:NOT PROVIDED

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

Stability Indicator/Materials to Avoid:YES

BASES, SODIUM HYPOCHLORITE (BLEACH), STRONG OXIDIZING AGENTS,
COMBUSTIBLE MATERIAL, HALOGENATED MATERIALS, STRONG ACIDS. CONTACT
WITH BASE LIBERATES FLAMMABLE MATERIAL.

Stability Condition to Avoid:NOT PROVIDED

Hazardous Decomposition Products:SULFUR DIOXIDE, AMMONIA, CHLORAMINE,
OXIDES OF NITROGEN, OXIDES OF SULFUR.

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

Toxicological Information: EFFECTS OF EXPOSURE: 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. EYES: CAUSES IRRITATION. SK

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===== 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. AFTER DILUTION WITH A LARGE AMOUNT OF WATER, FOLLOWED BY SECONDARY WASTE TREATMENT, THIS MATERIAL IS NOT EXPECTED TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS.

===== Disposal Considerations =====

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 EVEN AFTER CONTAINER IS EMPTIED.

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

Transport Information: FOR TRANSPORTATION INFORMATION REGARDING THIS PRODUCT CALL THE KODAK WORLDWIDE TRANSPORTATION HAZMAT HOT LINE: (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 THIOSULFATE, AMMONIUM BISULFITE; AS SOURCES OF
AQUEOUS AMMONIA.

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

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

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assume responsibility for the suitability of this information to their
particular situation.