

EASTMAN KODAK COMPANY -- 158 2352,PT A,KODAK EKTACOLOR RA BLEACH FIXER / RA-4 --  
6750-01-376-5884

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

Product ID:158 2352,PT A,KODAK EKTACOLOR RA BLEACH FIXER / RA-4

MSDS Date:07/22/2000

FSC:6750

NIIN:01-376-5884

Status Code:A

Kit Part:Y

MSDS Number: CKTYG

=== Responsible Party ===

Company Name:EASTMAN KODAK COMPANY

Address:343 STATE STREET

City:ROCHESTER

State:NY

ZI

P:14650

Country:US

Info Phone Num:716-722-5151/(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

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

Ingred Name:WATER

CAS:7732-18-5

RTECS #:ZC0110000

Minumum % Wt:60.

Maxumum % Wt:6

5.  
Other REC Limits:NOT PROVIDED  
Code:F  
Code:F

Ingred Name:AMMONIUM THIOSULFATE  
CAS:7783-18-8  
RTECS #:XN6465000  
= Wt:37.  
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  
OSHA PEL:NOT PROVIDED  
ACGIH TLV:5 MG/M3  
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:25 MG/M3;10 PPM  
ACGIH TLV:25 MG/M3;10 PPM  
ACGIH STEL:37 MG/M3;15 PPM  
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:EFFECTS OF EXPOSURE: INHALATION:  
EXPECTED TO BE A LOW HAZARD FOR RECOMMENDED HANDLING. IN CONTACT  
WITH STRONG ACIDS OR IF HEATED, SULFITES MAY LIBERATE SULFUR  
D

IOXIDE GAS. SULFUR DIOXIDE GAS IS IRRITATING TO THE RESPIRATORY TRACT. SOME ASTHMATICS OR HYPERSENSITIVE INDIVIDUALS MAY EXPERIENCE DIFFICULT BREATHING. EYES: NO SPECIFIC HAZARD KNOWN. MAY CAUSE TRANSIENT IRRITATION. SKIN: 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 P

RESENT 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: 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: MAY CAUSE TRANSIENT IRRITATION.

Medical Condition 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 =====

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: WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IF SYMPTOMS OCCUR. 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 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: 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 CONTAINER.

Other Precautions:AVOID BREATHING MIST OR VAPOR. AVOID CONTACT WITH EYES AND PROLONGED OR REPEATED CONTACT WITH SKIN. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING. KEEP FROM CONTACT WITH OXIDIZING MATERIALS, HIGHLY OXYGENATED OR HALOGENATED SOLVENTS, ORGANIC COMPOUNDS CONTAINING REDUCIBLE FUNCTIONAL GROUPS.

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

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: FULL-FACE POSITIVE-PRESSURE AIR-SUPPLIED. SEE STABILITY AND REACTIVITY SECTION. IF RESPIRATORS

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:FOR PROLONGED OR REPEATED SKIN CONTACT: IMPERVIOUS GLOVES SHOULD BE WORN.

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

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

Work Hygienic Practices:IT IS A GOOD INDUSTRIAL HYGIENE PRACTICE TO MINIMIZE EYE CONTACT. IT IS A GOOD INDUSTRIAL HYGIENE PRACTICE TO MINIMIZE SKIN CONTACT.

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 =====

es =====

HCC:N1  
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): 24 MBAR (18 MM HG)  
Vapor Density:0.6  
Spec Gravity:1.23  
pH:5.5  
Viscosity:NOT PROVIDED  
Evaporation Rate & Reference:NOT PROVIDED  
Solubility in Water:COMPLETE  
Appearance and Odor:LIGHT YELLOW LIQUID. ODOR: AMMONIA  
Percent Volatiles by Volume:60-65 WT  
Corrosion Rate:NOT PROVIDED

===== Stability and Rea  
ctivity Data =====

Stability Indicator/Materials to Avoid:YES  
STRONG ACIDS, BASES, STRONG OXIDIZING AGENTS, COMBUSTIBLE MATERIAL,  
HALOGENATED MATERIALS, SODIUM HYPOCHLORITE (BLEACH). CONTACT WITH  
BASE LIBERATES FLAMMABLE MATERIAL.  
Stability Condition to Avoid:STABLE  
Hazardous Decomposition Products:AMMONIA, CHLORAMINE, CARBON DIOXIDE,  
CARBON MONOXIDE, OXIDES OF NITROGEN, OXIDES OF SULFUR

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

Toxicological  
Information:EFFECTS OF EXPOSURE: INHALATION: EXPECTED TO  
BE A LOW HAZARD FOR RECOMMENDED HANDLING. IN CONTACT WITH STRONG  
ACIDS OR IF HEATED, SULFITES MAY LIBERATE SULFUR DIOXIDE GAS.  
SULFUR DIOXIDE GAS IS IRRITA TING TO THE RESPIRATORY TRACT. SOME  
ASTHMATICS OR HYPERSENSITIVE INDIVIDUALS MAY EXPERIENCE DIFFICULT  
BREATHING. EYES: NO SPECIFIC HAZARD KNOWN. MAY CAUSE TRANSIENT  
IRRITATION. SKIN: THIS MATERIAL HA S A LOW POTENTIAL TO CAUSE  
ALLERGIC SKIN REACTIONS; HOWEVE

R, CASES OF HUMAN SKIN SENSITIZATION  
HAVE BEEN REPORTED. INGESTION: MAY BE HARMFUL IF SWALLOWED.

===== 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 DEGRADABLE (>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  
AMOUNTS 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 (AS CHEMICAL SOURCE 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

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

Disclaimer (provided with this information by the compiler)

g agencies):

This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.