KODAK RP X-OMAT LO Fixer and Replenisher

MATERIAL SAFETY DATA SHEET

000009541/F/USA
Approval Date: 11/11/1998
Print Date: 05/26/2001

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODAK RP X-OMAT LO Fixer and Replenisher

Catalog Number(s): 808 5102 - 4x4 litres - Part A & B

Manufacturer/Supplier: EASTMAN KODAK COMPANY, Rochester, New York 14650

For Emergency Health, Safety & Environmental Information, call (716) 722-5151

For other information or to request an MSDS, call (800) 242-2424.

Synonym(s): Part A: KAN 966702; PCD 5961; D-0030.010
Part B: CIN 10066966; PCD 14105

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

Part A:
45-50 Water (007732-18-5)
35-40 Ammonium thiosulfate (007783-18-8)
1-5 Sodium thiosulfate (007772-98-7)
1-5 Acetic acid (000064-19-7)
1-5 Ammonium bisulfite (010192-30-0)

Part B:
75-80 Water (007732-18-5)
20-25 Aluminum sulfate (010043-01-3)

Working solution:
80-85 Water (007732-18-5)
10-15 Ammonium thiosulfate (007783-18-8)
1-5 Sodium thiosulfate (007772-98-7)
< 1 Acetic acid (000064-19-7)
< 1 Ammonium bisulfite (010192-30-0)
3. HAZARDS IDENTIFICATION

Part A:

CONTAINS: Ammonium bisulfite (010192-30-0), sodium bisulfite (007631-90-5)
WARNING!
MAY BE HARMFUL IF SWALLOWED

HMIS Hazard Ratings:
Health - 1, Flammability - 0, Reactivity - 0, Personal Protection - B

NFPA Hazard Ratings:
Health - 1, Flammability - 0, Reactivity (Stability) - 0

Part B:

LOW HAZARD FOR RECOMMENDED HANDLING

HMIS Hazard Ratings:
Health - 0, Flammability - 0, Reactivity - 0, Personal Protection - A

NFPA Hazard Ratings:
Health - 0, Flammability - 0, Reactivity (Stability) - 0

Working solution:

CONTAINS: Ammonium bisulfite (010192-30-0), sodium bisulfite (007631-90-5)
WARNING!
MAY BE HARMFUL IF SWALLOWED

HMIS Hazard Ratings:
Health - 1, Flammability - 0, Reactivity - 0, Personal Protection - B

NFPA Hazard Ratings:
Health - 1, Flammability - 0, Reactivity (Stability) - 0

NOTE: HMIS and NFPA hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. The personal protection index is only intended for general guidance on personal protection equipment (PPE) that is suitable for the potential hazards of the material. PPE (e.g., respirators) may not be needed if engineering controls (e.g., local ventilation) are adequate. An asterisk (*), in the HMIS health field, designates potential chronic or target organ hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

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4. FIRST-AID MEASURES

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Eyes: Any material that contacts the eye should be washed out immediately with water. 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.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use appropriate agent for adjacent fire.

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and
protective clothing. Fire or excessive heat may produce hazardous
decomposition products.

Hazardous Combustion Products: None (noncombustible). (see also Hazardous
Decomposition Products section).

Unusual Fire and Explosion Hazards: None

6. 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.

7. HANDLING AND STORAGE

Personal Precautionary Measures:

Part A & Working solution: Avoid breathing mist or vapor. Avoid contact with
eyes and prolonged or repeated contact with skin. Use with adequate
ventilation. Wash thoroughly after handling.

Part B: Use with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion:

Part A & Working solution: Keep from contact with oxidizing materials.

Part B: No special precautionary measures should be needed under anticipated
conditions of use.

Storage:

Part A & Working solution: Keep container tightly closed. Keep away from
incompatible substances (see Incompatibility section).

Part B: Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):
Acetic acid: 25 mg/m³ TWA; 37 mg/m³ STEL
Aluminum sulfate: 2 mg/m³ TWA

OSHA (USA) Permissible Exposure Limit (PEL - 1971 Table Z-1 Values):

Acetic acid: 25 mg/m³ TWA

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions.

Respiratory Protection:

Part A & Part B: None should be needed. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: Full-face organic vapor cartridge. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Working solution: 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.

Eye Protection: It is a good industrial hygiene practice to minimize eye contact. Wear safety glasses with side shields (or goggles).

Skin Protection: It is a good industrial hygiene practice to minimize skin contact. For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Recommended Decontamination Facilities: Eye bath, washing facilities, safety shower

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<td>Color:</td>
</tr>
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<td>Vapor Pressure at 20°C (68°F):</td>
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10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility:

Part A & Working solution: Strong acids, bases, sodium hypochlorite (bleach), strong oxidizing agents. Contact with base liberates flammable material.

Part B: None with common materials and contaminants with which the material may reasonably come into contact.

Hazardous Decomposition Products:

Part A & Working solution: Ammonia, chloramine, nitrogen oxides (NOx), sulfur dioxide.

Part B: Sulfur dioxide

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

Inhalation:

Part A & Working solution: 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 irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

Part B: Low hazard for usual industrial handling by trained personnel.

Eyes:

Part A: May cause transient irritation. However, immediate flushing of the eyes with water will minimize any irritative effect.

Part B: Low hazard for usual industrial handling or commercial handling by trained personnel.

Working solution: No specific hazard known. May cause transient irritation.

Skin:

Part A & Working solution: This material has a low potential to cause
allergic skin reactions; however, cases of human skin sensitization have been reported.

Part B: Low hazard for recommended handling.

Ingestion:

Part A & 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.

Part B: Expected to be a low ingestion hazard.

12. ECOLOGICAL INFORMATION

Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur during the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publically owned treatment works.

Summary: Data for the major components of this material have been used to estimate the environmental impact of this material. However, this material, itself, has not been tested for environmental effects.

Part A:

This material is a moderately acidic aqueous solution, and this property may cause adverse environmental effects. It is expected to have the following properties: a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a high potential to affect the germination and/or early growth of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge, a low potential to bioconcentrate. After dilution with a large amount of water, followed by secondary waste treatment, this material is not expected to cause adverse environmental effects.

Part B:

This material is a strongly acidic aqueous solution, and this property may cause adverse environmental effects. It is expected to have the following properties: no biochemical oxygen demand and no potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a high potential to affect the germination and/or early growth of some plants, a low potential to bioconcentrate. After dilution with a large amount of water, followed by secondary waste treatment, this material is not expected to cause adverse environmental effects.

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Flush to sewer with large amounts of water.
14. 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.

15. 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

- 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

- 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: None

16. OTHER INFORMATION

US/Canadian Label Statements:

Part A:

CONTAINS: Ammonium bisulfite (010192-30-0), sodium bisulfite (007631-90-5)
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.

For additional information, see Material Safety Data Sheet (MSDS) for this material.

Part B:

LOW HAZARD FOR RECOMMENDED HANDLING

Keep out of reach of children

For additional information, see Material Safety Data Sheet (MSDS) for this material.
Working solution:

Contains: Ammonium bisulfite (010192-30-0), sodium bisulfite (007631-90-5)

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

A: R-1, S-1, F-0, C-0
B: R-1, S-1, F-0, C-0
WS: R-1, S-1, F-0, C-0