Kodak TAKE PICTURES. FURTHER.™

MSDS Product Name: KODAK RA Developer and Replenisher, MX 1735

MATERIAL SAFETY DATA SHEET

000007966/F/USA
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODAK RA Developer and Replenisher, MX 1735

Catalog Number(s): 814 9940 - 128 ounce(s)
849 1342 - 2.5 gallons (U.S.)
110 7275 - 5 gallons (U.S.)
891 6579 - 30 gallons (U.S.)
111 1889 - 52 gallons (U.S.)

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): Concentrate: PCD 6216, C-0112.490

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

Concentrate:

60-65	Water (007732-18-5)
10-15	Potassium sulfite (010117-38-1)
9	Diethylene glycol (000111-46-6)
7	Hydroquinone (000123-31-9)
1-5	Sodium sulfite (007757-83-7)
1-5	Potassium carbonate (000584-08-7)

Working solution (Approximate dilution - 200 ml concentrate to make 1 litre)

80-95	Water (007732-18-5)
1-5	Potassium sulfite (010117-38-1)
1-5	Diethylene glycol (000111-46-6)
1-5	Hydroquinone (000123-31-9)
< 1	Sodium sulfite (007757-83-7)

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3. HAZARDS IDENTIFICATION

Concentrate:

CONTAINS: Hydroquinone (000123-31-9), diethylene glycol (000111-46-6), potassium sulfite (010117-38-1), sodium sulfite (007757-83-7)
WARNING!
HARMFUL IF SWALLOWED
CAN CAUSE KIDNEY DAMAGE
CAUSES SKIN AND EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION

HMIS Hazard Ratings: Health - * 2, Flammability - 1, Reactivity - 0, Personal Protection - B

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

Working solution:

CONTAINS: Hydroquinone (000123-31-9), diethylene glycol (000111-46-6)
WARNING!
HARMFUL IF SWALLOWED
CAN CAUSE KIDNEY DAMAGE
CAUSES SKIN AND EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION

HMIS Hazard Ratings: Health - * 2, Flammability - 0, Reactivity - 0, Personal Protection - B

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

Eastman Kodak Hazard Ratings: R-1, S-2, F-1, C-0
Working solution: Eastman Kodak Hazard Ratings: R-1, S-2, F-0, C-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: If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

Skin:

Concentrate: Immediately remove contaminated clothing and shoes and wash with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Working solution: Wash with soap and water. Remove contaminated clothing and shoes. If skin irritation or an allergic skin reaction develops, get medical attention. 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.

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5. FIRE FIGHTING MEASURES

Extinguishing Media:

Concentrate: Water spray, carbon dioxide (CO2), dry chemical, alcohol foam.

Working solution: Use appropriate agent for adjacent fire.

Special Fire-Fighting Procedures:

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

Working solution: Wear self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products:

Concentrate: Carbon dioxide, carbon monoxide, oxides of sulfur

Working solution: None (noncombustible).

Unusual Fire and Explosion Hazards: None

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6. ACCIDENTAL RELEASE MEASURES

For Small Amounts: Flush to sewer with large amounts of water. Clean surface thoroughly to remove residual contamination.

For Large Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

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7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling. The routine use of a nonalkaline (acid) type of hand cleaner and regular cleaning of working surfaces, gloves, etc. will help minimize the possibility of a skin reaction.

Prevention of Fire and Explosion:

Concentrate: Keep from contact with oxidizing materials.

Working solution: No special precautionary measures should be needed under anticipated conditions of use.

Storage:

Concentrate: Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section).

Working solution: Keep container closed.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):

Hydroquinone: 2 mg/m3 TWA

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

Hydroquinone: 2 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: None should be needed.

Eye Protection: Wear safety glasses with side shields (or goggles).

Skin Protection: Wear impervious gloves.

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

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid
Color: Light yellow
Odor: Odorless
Specific Gravity (water = 1):
  Concentrate: 1.26
  Working solution: 1.02 - 1.09
Vapor Pressure at 20°C (68°F): 24 mbar (18 mm Hg)
Vapor Density (Air = 1): 0.6
Volatile Fraction by Weight:
  Concentrate: 65-60%
  Working solution: > 90%
Boiling Point: 100°C (212°F)
Solubility in Water: Complete
pH:
  Concentrate: 10.9
  Working solution: 10.3 - 10.4
Flash Point:
  Concentrate: None
  Working solution: None, noncombustible liquid

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10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility:

  Concentrate: Strong oxidizing agents, strong acids

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

Hazardous Polymerization: Will not occur.

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11. 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 irritating to the respiratory tract. Some asthmatics or sulfite-sensitive individuals may experience wheezing or chest tightness.

  Eyes: Causes irritation.

  Skin: Causes irritation. May cause allergic skin reaction.

  Ingestion: Harmful if swallowed. Can cause kidney damage. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

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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. This material is a moderately alkaline aqueous solution, and this property may cause adverse environmental effects. However, this material, itself, has not been tested for environmental effects.

It is expected to have the following properties: a moderate biochemical oxygen

demand and may cause oxygen depletion in aqueous systems, a high potential to affect some aquatic organisms, a moderate potential to affect secondary waste treatment microbial metabolism, a moderate potential to affect the germination and/or early growth of some plants, a low potential to persist in the environment, 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.

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13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

For Small Amounts: Flush to sewer with large amounts of water.

For Large Amounts: Contract with a licensed chemical disposal agency.

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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.

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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: Hydroquinone, diethylene glycol

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16. OTHER INFORMATION

US/Canadian Label Statements:

Concentrate:

CONTAINS: Hydroquinone (000123-31-9), diethylene glycol (000111-46-6), potassium sulfite (010117-38-1), sodium sulfite (007757-83-7)
WARNING!
HARMFUL IF SWALLOWED
CAN CAUSE KIDNEY DAMAGE
CAUSES SKIN AND EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION

Avoid contact with eyes, skin, and clothing.
Wash thoroughly after handling.

FIRST AID: If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. In case of skin contact, immediately wash with soap and plenty of water. Call a physician or poison control center immediately. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

IN CASE OF FIRE: Use water spray, carbon dioxide (CO2), dry chemical,

alcohol foam

IN CASE OF SPILL: Absorb spill with inert material, then place in a chemical waste container. Flush residual spill or area with water. For large spills, dike for later disposal. Prevent runoff from entering drains, sewers, and streams.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

Keep out of reach of children

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

Working solution:

CONTAINS: Hydroquinone (001310-58-3), diethylene glycol (000111-46-6)
WARNING!
HARMFUL IF SWALLOWED
CAN CAUSE KIDNEY DAMAGE
CAUSES SKIN AND EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION

Avoid contact with eyes, skin, and clothing.
Wash thoroughly after handling.

FIRST AID: If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. In case of skin contact, immediately wash with soap and plenty of water. Call a physician or poison control center immediately. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Keep out of reach of children

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

Additional hazard precautions for containers greater than 1 gallon of liquid or 5 pounds of solid:

Since emptied containers retain product residue, follow label warnings even after container is emptied.

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.

R-1, S-2, F-1, C-0
WS:R-1, S-2, F-0, C-0

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