

MATERIAL SAFETY DATA SHEET

200000522/F/USA - C-0192.000E

Approval Date: 11/04/1992

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODALITH Super RT Developer, Part A

Catalog Number(s): 155 9566 - To Make 2 gallon (U.S.)  
155 9582 - To Make 10 gallon (U.S.)  
155 9848 - To Make 25 gallon (U.S.)

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

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

For Other Information, call the Marketing and Distribution Center in Your Area.

Synonym(s): Part A: KAN 354549; PCD 244; C-0192.000  
Working solution: KAN 965761; Contains: PCD 244 - Part A, PCD 233 - Part B

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

Part A:

70-75	Sodium formaldehyde bisulfite (000870-72-4)
16	Hydroquinone (000123-31-9)
5-10	Boric acid (010043-35-3)
1-5	Sodium sulfite (007757-83-7)
1-5	Sodium hexametaphosphate (010124-56-8)

Working solution:

80-85	Water (007732-18-5)
5-10	Sodium carbonate (000497-19-8)
5-10	Sodium formaldehyde bisulfite (000870-72-4)
1	Hydroquinone (000123-31-9)
1-5	Boric acid (010043-35-3)

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3. HAZARDS IDENTIFICATION

Part A:

WARNING! CONTAINS: Hydroquinone (000123-31-9)

HARMFUL IF SWALLOWED

DUST IRRITATING TO THE EYES AND RESPIRATORY TRACT

REPEATED EXPOSURE TO DUST MAY CAUSE EYE INJURY

CAUSES SKIN AND EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

CAUTION! POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES

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CONTACT WITH ACID LIBERATES HARMFUL GAS.  
CONTACT WITH BASE LIBERATES HARMFUL GAS  
CONTACT WITH ACID LIBERATES FLAMMABLE GAS  
CONTACT WITH BASE LIBERATES FLAMMABLE GAS

Working solution:

WARNING! CONTAINS: Hydroquinone (000123-31-9)

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MAY CAUSE ALLERGIC SKIN REACTION

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4. FIRST-AID MEASURES

Inhalation: 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.

Skin: Immediately remove contaminated clothing and shoes and wash with soap and plenty of water. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion:

Part A: Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Working solution: Drink 1-2 glasses of water. Seek medical attention.

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5. FIRE FIGHTING MEASURES

Extinguishing Media:

Part A: Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical

Working solution: Use appropriate agent for adjacent fire.

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products:

Part A: Carbon dioxide, carbon monoxide, oxides of sulfur, (see also Hazardous Decomposition Products section)

Working solution: None (noncombustible), (see also Hazardous Decomposition Products section)

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Unusual Fire and Explosion Hazards:

Part A: Powdered material may form explosive dust-air mixtures.

Working solution: None

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6. ACCIDENTAL RELEASE MEASURES

Part A: Sweep up and place in a container for chemical waste.

Working solution: Flush to sewer with large amounts of water.

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7. HANDLING AND STORAGE

Personal Precautionary Measures:

Part A: Avoid contact with eyes, skin, and clothing. Avoid breathing dust. 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.

Working solution: 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:

Part A: Refer to NFPA Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries." Keep from contact with oxidizing materials.

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

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

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):



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Hydroquinone: 2 mg/m<sup>3</sup> TWA

OSHA (USA) Permissible Exposure Limit (PEL):

Hydroquinone: 2 mg/m<sup>3</sup> TWA

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

Respiratory Protection:

Part A: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: Dust. If formaldehyde is emitted at levels requiring respiratory protection, the following respiratory type should be worn: Full-face with cartridges or canisters specifically approved by NIOSH for protection against formaldehyde or a Type C air-supplied. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29CFR 1910.134 and 29CFR 1910.1048.

Working solution: None should be needed.

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

Skin Protection: Wear impervious gloves and protective clothing appropriate for the risk of exposure.

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

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9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical Form:
  - Part A: Solid
  - Working solution: Liquid
- Color:
  - Part A: White
  - Working solution: Colorless
- Odor: Odorless
- Specific Gravity (water = 1):
  - Part A: Not available
  - Working solution: 1.113
- Vapor Pressure:
  - Part A: Negligible
  - Working solution: 24 mbar (18 mm Hg)
- Vapor Density (Air = 1):
  - Part A: Not applicable

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- Working solution: 0.6
  - Volatile Fraction by Weight:
    - Part A: Negligible
    - Working solution: 85 %
  - Boiling Point:
    - Part A: Not applicable
    - Working solution: 100 C (212 F)
  - Melting Point:
    - Part A: Not available
    - Working solution: Not applicable
  - Solubility in Water:
    - Part A: Appreciable
    - Working solution: Complete
  - pH:
    - Part A: Not applicable
    - Working solution: 9.94
  - Flash Point:
    - Part A: Not applicable, combustible solid
    - Working solution: None, noncombustible liquid

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10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility:

Part A: Strong oxidizing agents. Contact with acid liberates harmful gas. Contact with base liberates harmful gas. Contact with acid liberates flammable material. Contact with base liberates flammable material.

Working solution: Contact with acid liberates harmful gas. Contact with base liberates harmful gas. Contact with acid liberates flammable material. Contact with base liberates flammable material.

Hazardous Decomposition Products:

Part A: Formaldehyde

Working solution: Formaldehyde, carbon dioxide, carbon monoxide, sulfur dioxide

Hazardous Polymerization: Will not occur.

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11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

Inhalation:



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Part A: Airborne dust irritating. May cause irritation to the mucous membranes and upper respiratory tract.

Working solution: Expected to be a low hazard for recommended handling.

Eyes:

Part A: Causes irritation. Airborne dust irritating. Repeated exposure to dust may cause eye injury.

Working solution: Causes irritation.

Skin: Causes irritation. May cause allergic skin reaction.

Ingestion:

Part A: Harmful if swallowed.

Working solution: Expected to be a low ingestion hazard.

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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. However, this material, itself, has not been tested for 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 high potential to affect some aquatic organisms, a high potential to affect secondary waste treatment microbial metabolism, a moderate potential to affect the germination and/or early growth of some plants, some potential to biodegrade with acclimated 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.

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13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws.

Part A:

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For Small Amounts: Flush to sewer with large amounts of water.  
For Large Amounts: Contract with a licensed chemical disposal agency.

Working solution: Flush to sewer with large amounts of water.  
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14. TRANSPORT INFORMATION

- For transportation information regarding this product, please phone the Eastman Kodak Distribution Center nearest you: Rochester, NY (716) 588-3536 or 588-3573 or 588-3035; Oak Brook, IL (312) 954-6000; Chamblee, GA (404) 455-0123; Dallas, TX (214) 241-1611; Whittier, CA (213) 945-1255; Honolulu, HI (808) 833-1661.

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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

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16. OTHER INFORMATION

US/Canadian Label Statements:

Part A:

CONTAINS: Hydroquinone (000123-31-9)

WARNING!

HARMFUL IF SWALLOWED

DUST IRRITATING TO THE EYES AND RESPIRATORY TRACT

REPEATED EXPOSURE TO DUST MAY CAUSE EYE INJURY

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CONTACT WITH ACID LIBERATES FLAMMABLE GAS

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Avoid breathing dust.  
Avoid contact with eyes, skin, and clothing.  
Use with adequate ventilation.  
Wash thoroughly after handling.  
Minimize dust generation and accumulation.

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

IN CASE OF FIRE: Use water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, dry sand

IN CASE OF SPILL: Sweep or scoop up and remove.

Working solution:

Contains : Hydroquinone (000123-31-9)

WARNING!

CAUSES SKIN AND EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

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Wash thoroughly after handling.

FIRST AID: In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. In case of skin contact, wash skin with soap and plenty of water. Get medical attention. Remove contaminated clothing and shoes. Wash clothing before reuse. Destroy or thoroughly clean contaminated shoes.

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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.



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