

MATERIAL SAFETY DATA SHEET

200000218/F/USA - C-0017.010F

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODAK DEKTOL Developer (Single Powder)

Catalog Number(s):      123 1802 - To Make 32 ounce(s)  
                             123 3113 - To Make 128 ounce(s)  
                             146 4700 - To Make 1 quart (U.S.)  
                             146 4718 - To Make 1/2 gallon (U.S.)  
                             146 4726 - To Make 1 gallon (U.S.)  
                             146 4734 - To Make 5 gallons (U.S.)  
                             807 7927 - Kit(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):      Concentrate: KAN 354538; PCD 224; C-0017.010  
   Working solution: KAN 471363; C-0017.100

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

Concentrate:

50-55      Sodium carbonate, monohydrate (005968-11-6, anhydrous: 000497-19-8)  
30-35      Sodium sulfite (007757-83-7)  
6          Hydroquinone (000123-31-9)  
1-5        4-(methylamino)phenol sulfate (000055-55-0)  
1-5        Sodium hexametaphosphate (010124-56-8)  
1-5        Potassium bromide (007758-02-3)

Working solution:

90-95      Water (007732-18-5)  
1-5        Sodium carbonate (000497-19-8)  
1-5        Sodium sulfite (007757-83-7)  
< 1        Hydroquinone (000123-31-9)  
< 1        4-(methylamino)phenol sulfate (000055-55-0)

3. HAZARDS IDENTIFICATION

Concentrate:

WARNING! CONTAINS: Hydroquinone (000123-31-9); 4-(methylamino)phenol sulfate (000055-55-0); Sodium carbonate, monohydrate (005968-11-6)

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HARMFUL IF SWALLOWED  
DUST IRRITATING TO THE EYES AND RESPIRATORY TRACT  
CAUSES SKIN AND EYE IRRITATION  
MAY CAUSE ALLERGIC SKIN REACTION

Working solution:

WARNING! CONTAINS: Hydroquinone (000123-31-9); 4-(methyldamino)phenol sulfate (000055-55-0)

CAUSES SKIN AND EYE IRRITATION  
MAY CAUSE ALLERGIC SKIN REACTION

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4. FIRST-AID MEASURES

Inhalation:

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

Working solution: 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: Immediately flush with plenty of water and wash with a non-alkaline (acid) type of skin cleaner. 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:

Concentrate: 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: Use appropriate agent for adjacent fire.

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

Hazardous Combustion Products:

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

Working solution: None (noncombustible).

Unusual Fire and Explosion Hazards: None

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6. ACCIDENTAL RELEASE MEASURES

Concentrate: Flush to sewer with large amounts of water. Otherwise, sweep up and place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

Working solution: 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.

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7. HANDLING AND STORAGE

Personal Precautionary Measures:

Concentrate: Avoid breathing dust. 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.

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

Storage:

Concentrate: Keep container 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:

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ACGIH Threshold Limit Value (TLV):

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.

Respiratory Protection:

Concentrate: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn.

Respirator type: Dust. 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.

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

Skin Protection: Wear impervious gloves.

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

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9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical Form:

Concentrate: Solid

Working solution: Liquid

- Color:

Concentrate: White

Working solution: Light yellow

- Odor: Odorless

- Specific Gravity (water = 1):

Concentrate: Not available

Working solution: 1.04-1.06

- Vapor Pressure at 20 C (68 F)

Concentrate: Negligible

Working solution: 24 mbar (18 mm Hg)

- Vapor Density (Air = 1):

Concentrate: Not applicable

Working solution: 0.6

- Evaporation Rate (n-butyl acetate = 1):

Concentrate: Negligible

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- Working solution: 0.4
- Volatile Fraction by Weight:  
Concentrate: Negligible  
Working solution: 90-95%
  - Boiling Point:  
Concentrate: Not applicable  
Working solution: >100 C (>212 F)
  - Melting Point:  
Concentrate: Not available  
Working solution: Not applicable
  - Solubility in Water:  
Concentrate: Appreciable  
Working solution: Complete
  - pH:  
Concentrate: Not applicable  
Working solution: 10.2-10.4
  - Flash Point:  
Concentrate: Not applicable, noncombustible solid  
Working solution: None, noncombustible liquid

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10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility:

Concentrate: Strong acids

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

Hazardous Decomposition Products:

Concentrate: Carbon dioxide, carbon monoxide, sulfur dioxide

Hazardous Polymerization: Will not occur.

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11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

Inhalation:

Concentrate: 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.



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Eyes:

Concentrate: Causes irritation. Airborne dust irritating.

Working solution: Causes irritation.

Skin: Causes irritation. May cause allergic skin reaction.

Ingestion:

Concentrate: Harmful if swallowed.

Working solution: Expected to be a low ingestion hazard.

Acute Toxicity Data:

Data for Concentrate

Oral LD-50 (rat): 0.5-5.0 g/kg  
Skin irritation: moderate irritation

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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 forms a strongly 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 high 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 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. 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.

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

16. OTHER INFORMATION

US/Canadian Label Statements:

Concentrate:

CONTAINS: Hydroquinone (000123-31-9); 4-(methylamino)phenol sulfate (000055-55-0); Sodium carbonate, monohydrate (005968-11-6)

WARNING!

HARMFUL IF SWALLOWED

DUST IRRITATING TO THE EYES AND RESPIRATORY TRACT

CAUSES SKIN AND EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

Avoid breathing dust.

Avoid contact with eyes, skin, and clothing.

Use with adequate ventilation.

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. If inhaled, move to fresh air. Treat symptomatically. In case of eye contact, immediately flush eyes with plenty of water for at least 15

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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.

Working solution:

CONTAINS: Hydroquinone (000123-31-9); 4-(methylamino)phenol sulfate (000055-55-0)

WARNING!

CAUSES SKIN AND EYE IRRITATION  
MAY CAUSE ALLERGIC SKIN REACTION

Avoid contact with eyes, skin, and clothing.  
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 if symptoms occur. 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:

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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



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of these materials and the safety and health of employees and customers and the protection of the environment.



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