

200000233/F/USA - C-0027.100F

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODAK Developer D-76

Catalog Number(s):        123 0895 - To Make 1 quart  
                             123 0937 - To Make 1 gallon(s) (U.S.)  
                             146 4791 - To Make 1 quart  
                             146 4809 - To Make 1/2 gallon(s) (U.S.)  
                             146 4817 - To Make 1 gallon(s) (U.S.)  
                             146 4825 - To Make 10 gallon(s) (U.S.)

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

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

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

Synonym(s):     Concentrate: KAN 440508; PCD 5239; C-0027.100  
                             Working solution: C-0027.110

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

## Concentrate:

85-90     Sodium sulfite (007757-83-7)  
   4     Hydroquinone (000123-31-9)  
   1-5     Sodium tetraborate (001330-43-4)  
   1-5     4-(methylamino)phenol sulfate (000055-55-0)  
   < 1     Boric anhydride (001303-86-2)

## Working solution:

85-90     Water (007732-18-5)  
   5-10     Sodium sulfite (007757-83-7)  
   < 1     Hydroquinone (000123-31-9)  
   < 1     Sodium tetraborate (001330-43-4)  
   < 1     4-(methylamino)phenol sulfate (000055-55-0)

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3. HAZARDS IDENTIFICATION

## Concentrate:

WARNING! CONTAINS: Hydroquinone (000123-31-9), 4-(methylamino)phenol sulfate  
(000055-55-0)  
HARMFUL IF SWALLOWED  
CAUSES SKIN AND EYE IRRITATION

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MAY CAUSE ALLERGIC SKIN REACTION

Working solution:

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

CAUSES SKIN AND EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

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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: Immediately flush with plenty of water and wash with a non-alkaline (acid) type of skin cleaner. If skin irritation or an allergic skin reaction develops, get medical attention. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

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

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

Unusual Fire and Explosion Hazards: None

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#### 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.

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#### 7. HANDLING AND STORAGE

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

Storage: Keep container tightly closed. Keep away from incompatible substances.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):

Boric anhydride: 10 mg/m3 TWA

Hydroquinone: 2 mg/m3 TWA

Sodium tetraborate: 1 mg/m3 TWA

OSHA (USA) Permissible Exposure Limit (PEL):

Boric anhydride: 10 mg/m3 TWA dust; 5 mg/m3 TWA respirable fraction

Hydroquinone: 2 mg/m3 TWA

Sodium tetraborate: 10 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:

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

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- Physical Form:
    - Concentrate: Solid
    - Working solution: Liquid
  - Color:
    - Concentrate: Yellow
    - Working solution: Colorless
  - Odor:
    - Concentrate: Odorless
    - Working solution: Slight
  - Specific Gravity (water = 1):
    - Concentrate: Not available
    - Working solution: 1.08-1.09
  - 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:
    - Concentrate: Negligible
    - Working solution: 0.4
  - Volatile Fraction by Weight:
    - Concentrate: Negligible
    - Working solution: 85-90%
  - 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: 8.5
  - Flash Point:
    - Concentrate: Not applicable, noncombustible solid
    - Working solution: None, noncombustible liquid
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#### 10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: Strong acids

Hazardous Decomposition Products: Sulfur dioxide

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.

Eyes: Causes irritation.

Skin: Causes irritation. May cause allergic skin reaction.

### Ingestion:

Concentrate: 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 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)

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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:

##### Concentrate:

CONTAINS: Hydroquinone (000123-31-9), 4-(methyamino)phenol sulfate (000055-55-0),

WARNING!

HARMFUL IF SWALLOWED

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, 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.

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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!

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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 if symptoms occur. Remove contaminated clothing and shoes. Wash clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Keep out of reach of children.

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