

MATERIAL SAFETY DATA SHEET
EASTMAN KODAK COMPANY

000861

Date of Revision: 06/23/89

Kodak Accession Number: 444549

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PRODUCT INFORMATION

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Product Name: KODAK T-MAX Developer

Formula: Aqueous Mixture

Kodak Catalog Number(s): CAT 140 2767 - To Make 1 gallon; CAT 159 9844 - To Make 5 gallons

Solution Number: 5337

Kodak's Hazard Rating Codes: R: 1 S: 2 F: 1 C: 0

Manufacturer/Supplier:

Eastman Kodak Company

343 State Street

Rochester, New York 14650

USA

For Emergency Information: (716) 722-5151

For other purposes, call the Marketing and Distribution Center in your area.

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COMPONENT INFORMATION

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	Weight Percent	CAS Number	Accession Number
Diethanolamine sulfur dioxide	45-50	63149-47-3	931981
Water	40-45	7732-18-5	035290
*Hydroquinone**	4	123-31-9	900356
Sodium bisulfite	1-5	7631-90-5	900760

*Principal Hazardous Component(s)

**Chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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PHYSICAL DATA

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Appearance and Odor: Clear liquid, amine odor

Boiling Point: GT 100 C (GT 212 F) @ 760 mmHg

Vapor Pressure: ca. 18 mmHg @ 20 C

Evaporation Rate (n-butyl acetate = 1): Not Available

Vapor Density (Air = 1): ca. 0.6

Volatile Fraction by Weight: ca. 30%

Specific Gravity (Water = 1): 1.23

pH: ca. 8.3

Solubility in Water (by Weight): Complete

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GT = Greater than; LT = Less than

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FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT: None

EXTINGUISHING MEDIA: Water spray; Dry chemical; Carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Fire or excessive heat, like most materials in powder form, is capable of creating a dust explosion.

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REACTIVITY DATA

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STABILITY: Stable

INCOMPATIBILITY: Strong oxidizers; Strong acids

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion will produce carbon dioxide and probably carbon monoxide. Oxides of nitrogen and sulfur may also be present.

HAZARDOUS POLYMERIZATION: Will not occur.

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TOXICOLOGICAL PROPERTIES

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EXPOSURE LIMITS:

Component: Hydroquinone

ACGIH TLV: 2mg/m³ - TWA (ACGIH 1988-1989)

OSHA PEL: 2mg/m³ - TWA

Component: Sodium bisulfite

ACGIH TLV: 5mg/m³ - TWA (ACGIH 1988-1989)

OSHA PEL: 5mg/m³ - TWA

EXPOSURE EFFECTS:

Inhalation: Low hazard for usual industrial handling.

Eyes: Causes irritation.

Skin: Causes irritation. May cause allergic skin reaction.

Ingestion: May cause gastrointestinal tract irritation.

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PROTECTION AND PREVENTATIVE MEASURES

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VENTILATION: Good general ventilation should be sufficient.

SKIN AND EYE PROTECTION: Safety glasses with side shields are recommended. Impervious gloves should be worn. The routine use of a non-alkaline (acid) type of skin cleanser and regular cleaning of working surfaces, gloves, etc, will help minimize the possibility of allergic skin reaction.

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STORAGE AND DISPOSAL

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SPECIAL STORAGE AND HANDLING PRECAUTIONS

Keep from contact with oxidizing materials.
Keep container tightly closed and away from strong acids.

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SPILL, LEAK, AND DISPOSAL PROCEDURES

Flush to an acid-free sewer with large amounts of water. Discharge, treatment, or disposal may be subject to federal, state, or local laws.

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FIRST AID

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

Skin: Flush skin 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.

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

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ENVIRONMENTAL EFFECTS

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This chemical formulation has not been tested for environmental effects. Some laboratory test data and published data are available for the major components of this chemical formulation, and these data have been used to provide the following estimate of environmental impact: (1-11)

This chemical formulation is expected to have a high biological oxygen demand, and it may cause oxygen depletion in aquatic systems. It is expected to have a high potential to affect aquatic organisms. It is expected to have a moderate potential to affect secondary waste treatment microorganisms and the germination and growth of some plants. The components of this chemical formulation are readily biodegradable and are not expected to persist in an aquatic environment. They are not likely to bioconcentrate. The direct instantaneous discharge to a receiving body of water of an amount of this formulation which will rapidly produce, by dilution, a final concentration of 0.1 mg/L or less is not expected to cause an adverse environmental effect. After dilution with a large amount of water, followed by secondary waste treatment, the chemicals in this formulation are not expected to have any adverse environmental impact.

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TRANSPORTATION

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For Transportation information regarding this product, please phone the Eastman Kodak Distribution Center nearest you: Rochester, NY (716) 588-9293; Oak Brook, IL (312) 954-6000; Chamblee, GA (404) 455-0123; Dallas, TX (214) 241-1611; Whittier, CA (213) 693-5222; Honolulu, HI (808) 833-1661.

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 3. Battelle's Columbus Laboratories, Water Quality Criteria Data Book - Vol. 3 - Effects of Chemicals on Aquatic Life - Selected Data from the Literature Through 1968, for the U.S. Environmental Protection Agency, Project No. 18050 GWV, Contract No. 68-01-0007, May 1971.
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- McKee, J.E. and Wolf, H.W., Eds., Water Quality Criteria, State of California, Publication No. 3-A, 1963.
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 9. Juhnke, I. and Luedemann, D., Z. Wasser Abwasser Forsch., 11(5), 161-4 (1978) (in German).
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 11. Pomona College, Medicinal Chemistry Project, Chemical Parameter Data Base, Leo, A.J. and Hansch, C., Eds., Seaver Chemistry Laboratory, Claremont, CA, June 21, 1985.

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 PREPARATION INFORMATION
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Health and Environment Laboratories
 Eastman Kodak Company
 Rochester, New York 14650

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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 the 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.

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