45-050

MATERIAL SAFETY DATA SHEET

EASTMAN KODAK COMPANY
343 State Street
Rochester, New York 14650

For Emergency Health, Safety, and Environmental Information, call (716) 722-5151
For all other purposes, call the Marketing and Distribution Center in your area.

Date of Preparation: 5/19/83 Approved by U.S. Department of Labor

SECTION I. IDENTIFICATION

- Product Name: KODAK DEKTOL Developer (Single Powder)
- Formula: Solid Mixture
- Kodak Photographic Chemicals Catalog Number(s): CAT 169 1872 - To Make 8 Ounces; CAT 146 4718 - To Make 1/2 Gallon; CAT 146 4726 - To Make 1 Gallon; CAT 146 4700 - To Make 1 Quart; CAT 153 2944 - Tri Chem Pac
- Mixture Number: 224
- Kodak Accession Number: 354538

SECTION II. PRODUCT AND COMPONENT HAZARD DATA

A. COMPONENT(S):

	Percent	TLV*	Kodak Accession No.	CAS Reg. No.
Sodium carbonate, monohydrate	40-60	---	900860	5968-11-6
Sodium sulfite	20-40	---	901148	7757-83-7
*Hydroquinone	5-10	2 mg/m^3	900356	123-31-9
*p-Methylaminophenol sulfate	< 5	---	900615	55-55-0

[*Principal Hazardous Component(s)]

B. PRECAUTIONARY LABEL STATEMENT(S):

Contains hydroquinone and p-methylaminophenol sulfate

CAUTION! REPEATED CONTACT MAY CAUSE SKIN IRRITATION AND ALLERGIC SKIN REACTION.
AVOID BREATHING DUST.
MAY BE HARMFUL IF SWALLOWED.
If swallowed, induce vomiting.
Call a physician at once.
KEEP OUT OF THE REACH OF CHILDREN

SECTION III. PHYSICAL DATA

- Appearance and Odor: White powder; odorless
- Boiling Point: Not Applicable
- Vapor Pressure: Negligible
- Evaporation Rate (n-butyl acetate = 1): Not Applicable
- Vapor Density (Air = 1): Not Applicable
- Volatile Fraction by Weight: Negligible
- Specific Gravity (H_2O = 1): Not Applicable
- pH: Not Applicable
- Solubility in Water (by Weight): Appreciable

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

- Flash Point: None
- Flammable Limits in Air (% by volume in air): None
- Extinguishing Media: Not Applicable
- Special Fire Fighting Procedures:
  Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- Unusual Fire and Explosion Hazards:
  Fire or excessive heat may cause production of hazardous decomposition products.

SECTION V. REACTIVITY DATA

- Stability: Stable
- Incompatibility: Mineral acids
- Hazardous Decomposition Products:
  As with any other organic material, combustion will produce carbon dioxide and probably carbon monoxide.
  Sulfur dioxide
- Hazardous Polymerization: Will not occur.

SECTION VI. TOXICITY AND HEALTH HAZARD DATA

A. THRESHOLD LIMIT VALUE: See Section II

B. EXPOSURE EFFECTS:

Inhalation: Dust may cause upper respiratory tract irritation.

Eyes: Contact with the powder may cause eye irritation.

Skin: Prolonged or repeated skin contact may cause skin irritation and may result in an allergic skin reaction.

Ingestion: May be harmful if swallowed.

C. FIRST AID:

Inhalation: Remove from exposure, treat symptomatically, and get medical attention if symptoms persist.

Eyes: Immediately flush eyes with plenty of water and get medical attention.

Skin: Flush skin with plenty of water.
If skin irritation or an allergic skin reaction develops, get medical attention.

Ingestion: If swallowed, if conscious, rinse mouth and induce vomiting immediately by giving 1 or 2 glasses of water and touching back of throat with finger or blunt object. Never give anything by mouth to an unconscious person.

CALL A PHYSICIAN AT ONCE.

D. ANIMAL TOXICITY DATA:

Test	Species	Result(1)	Classification(2)
Oral LD_{50}	Rat	0.5 - 5.0 g/kg	Slighlty toxic
Skin Irritation	Guinea Pig	Slight-moderate irritation	

SECTION VII. PERSONAL PROTECTION AND CONTROLS

A. RESPIRATORY PROTECTION:

An appropriate NIOSH-approved respirator for dust should be worn if needed.

B. VENTILATION:

Local Exhaust: If needed to control dust.

Mechanical (General): Recommend at least ten air changes per hour for good general room ventilation.

C. SKIN AND EYE PROTECTION:

Protective gloves should be worn.
Safety glasses should be worn.

SECTION VIII. SPECIAL STORAGE AND HANDLING PRECAUTIONS

Keep dry.
Avoid strong acids.

SECTION IX. SPILL, LEAK, AND DISPOSAL PROCEDURES

Avoid inhalation and skin contact.
Wear suitable protective equipment.
Flush to an acid-free sewer with large amounts of water.
The direct instantaneous discharge to a receiving body of water of an amount of this chemical formulation which will rapidly produce, by dilution, a final concentration of 0.01 mg/L or less is not expected to cause an adverse environmental effect.
Discharge, treatment, or disposal may be subject to federal, state, or local laws.

SECTION X. ENVIRONMENTAL EFFECTS DATA

A. SUMMARY:

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:[1,3,4,5,6]

This chemical formulation has a high biological oxygen demand, and it is expected to cause significant oxygen depletion in aquatic systems. It is expected to have a high potential to affect aquatic organisms, secondary waste treatment microorganisms, and the germination and growth of some plants. The components of this chemical formulation are expected to be biodegradable and are not likely to bioconcentrate. The direct instantaneous discharge to a receiving body of water of an amount of this chemical formulation which will rapidly produce, by dilution, a final concentration of 0.01 mg/L or less is not expected to cause an adverse environmental effect. However, 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.

SECTION XI. TRANSPORTATION

Transportation information may be obtained by requesting an EXTERNAL TRANSPORTATION ADDENDUM sheet by catalog number(s) from Kodak Publications Data Services, Eastman Kodak Company, 343 State Street, Rochester, New York 14650.

SECTION XII. REFERENCES

1. Unpublished Data. Health, Safety, and Human Factors Laboratory. Eastman Kodak Company, Rochester, New York.

2. Hodge, H.C. and Sterner, J.H., Am. Indust. Hyg. Assn. Quart. 10, 93 (1949).

3. Verschueren, K., Handbook of Environmental Data on Organic Chemicals, Van Nostrand Reinhold Company, New York, N.Y., 1977.

4. Battelle's Columbus Laboratories, Water Quality Critical 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. 68-01-007, May 1971.

5. National Association of Photographic Manufacturers, Inc. and Hydroscience, Inc., Environmental Effects of Photoprocessing Chemicals, National Association of Photographic Manufacturers, Harrison, New York, 1974, 2 vols.

6. Kodak Publication J-41, BOD_5 and COD of Photographic Chemicals, Eastman Kodak Co., 1981.

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.

@153-2944*
@146-4700*
@146-4726*
@146-4718*
@169-1872*
82-0203