

**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 serving your area.

Date of Preparation: 9/13/82

Approved by U.S. Department of Labor

SECTION I. IDENTIFICATION

- Product Name: KODAK Rapid Fixer, Part B
- Formula: Aqueous Mixture
- Formula Date: 7/16/82
- Kodak Photographic Chemicals Catalog Number(s): CAT 173 3013 - 72 ounces;
CAT 197 3221 - 5 Gallons; CAT 146 4106 - To Make 1 Gallon; CAT 146 4114 -
To Make 5 Gallons
- Solution Number: 4415
- Kodak Accession Number: 365686
- *Kodak Hazard Rating Codes: R: 1 S: 3 F: 0 C: 0

*The Kodak Health Hazard Rating Code for Respiratory (R) exposure and Skin and Eye (S) exposure is on a scale of Low = 1; Moderate = 2; and High = 3. The Kodak Fire (F) and Reactivity (C) Hazard Codes are on an ascending scale from 0 to 4. F denotes relative flammability and C denotes relative reactivity or instability. Subcategories of C: (W) - water reactive, (A) - pyrophoric, (X) - oxidizer.

DO NOT CONFUSE WITH NFPA CODES!

SECTION II. PRODUCT AND COMPONENT HAZARD DATA

| A. COMPONENT(S): | Percent | TLV* | Kodak Accession No. | CAS Reg. No. |
|------------------|---------|---------------------|------------------------|--------------|
| Water | 65-75 | --- | 035290 | 7732-18-5 |
| Aluminum sulfate | 10-20 | 2 mg/m ³ | 907954 | 10043-01-3 |
| *Sulfuric acid | 10-15 | 1 mg/m ³ | 907485 | 7664-93-9 |

[*Principal Hazardous Component(s)]

D-0019.000G
82-0041

B. PRECAUTIONARY LABEL STATEMENT(S):

Household Label

Contains sulfuric acid

X POISON X

DANGER:

MAY CAUSE BURNS OF SKIN AND EYES.

HARMFUL IF SWALLOWED.

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes.

If swallowed do NOT induce vomiting.

Give milk or water.

Call a physician at once.

KEEP OUT OF REACH OF CHILDREN

Commercial Label:

Contains sulfuric acid

WARNING:

May cause burns of skin and eyes.

In case of contact, flush skin or eyes with plenty of water; for eyes, get medical attention.

SECTION III. PHYSICAL DATA

- Appearance and Odor: Clear, water-white solution; slight sulfur dioxide odor
- Boiling Point: > 100 °C (> 212 °F) @ 760 mmHg
- Vapor Pressure: ~ 17 mmHg @ 20 °C
- Evaporation Rate (n-butyl acetate = 1): Not Available
- Vapor Density (Air = 1): ~ 0.6
- Volatile Fraction by Weight: ~ 71 %
- Specific Gravity (H₂O = 1): 1.30
- pH: ~ 1.0
- Solubility in Water (by Weight): Complete

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: None
- Unusual Fire and Explosion Hazards: None

SECTION V. REACTIVITY DATA

- Stability: Stable
 - Incompatibility: Alkali
 - Hazardous Decomposition Products: None
 - Hazardous Polymerization: Will not occur.
-

SECTION VI. TOXICITY AND HEALTH HAZARD DATA

A. THRESHOLD LIMIT VALUE: See Section II

B. EXPOSURE EFFECTS:

Eyes: May cause eye burns.

Skin: Prolonged or repeated skin contact may result in burns.

Ingestion: Harmful if swallowed.

C. FIRST AID:

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

Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention.
Launder contaminated clothing before reuse.

Ingestion: Do not induce vomiting. Give milk or water.
CALL A PHYSICIAN AT ONCE.

SECTION VII. PERSONAL PROTECTION AND CONTROLS

A. RESPIRATORY PROTECTION: None should be needed.

B. VENTILATION:

Local Exhaust: None should be needed.

Mechanical (General): Recommended

C. SKIN AND EYE PROTECTION:

Protective gloves should be worn.
Safety glasses with side shields or goggles are recommended.

SECTION VIII. SPECIAL STORAGE AND HANDLING PRECAUTIONS

None

SECTION IX. SPILL, LEAK, AND DISPOSAL PROCEDURES

Wear suitable protective equipment.
Neutralize with sodium carbonate.
Flush material to sewer with large amounts of water.
Federal, state, and local regulations take precedence.

SECTION X. ENVIRONMENTAL EFFECTS DATA

A. SUMMARY:

This chemical formulation has not been tested for environmental effects. Some 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

This chemical formulation is a strongly acidic aqueous solution, and this property is the only one expected to cause adverse environment effects. This chemical formulation has a low biological oxygen demand, and it is expected to cause little oxygen depletion in aquatic systems. It is expected to have a low potential to affect aquatic organisms. The components of this chemical formulation are not likely to bioconcentrate. If diluted with a large amount of water, a moderate quantity of this chemical formulation released into the environment is not expected to have a significant 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. 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.

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.

@146-4114*
@146-4106*
@197-3221*
@173-3013*
82-0041