

KODAK VERSAMAT 885 Fixer and Replenisher, Part A

MATERIAL SAFETY DATA SHEET

200000628/F/USA

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODAK VERSAMAT 885 Fixer and Replenisher, Part A

Catalog Number(s): 199 7873 - To Make 75 litre

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

For Emergency Health, Safety & Environmental Information, call (585) 722-5151

For other information or to request an MSDS, call (800) 242-2424.

Synonym(s): KAN 365652; PCD 4360; D-0035.000

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

40-45	Ammonium thiosulfate (007783-18-8)
35-40	Water (007732-18-5)
1-5	Sodium bisulfite (007631-90-5)
1-5	Sodium acetate (000127-09-3)
1-5	Acetic acid (000064-19-7)
1-5	Sodium tetraborate, decahydrate (001303-96-4)

3. HAZARDS IDENTIFICATION

CONTAINS: Sodium bisulfite (007631-90-5); sodium tetraborate, decahydrate (001303-96-4); ammonium thiosulfate (007783-18-8); acetic acid (000064-19-7)

WARNING!

MAY BE HARMFUL IF SWALLOWED

MAY BE HARMFUL IF ABSORBED THROUGH SKIN

DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT. DRYING ON CLOTHING OR OTHER MATERIALS MAY CAUSE FIRE.

HMIS Hazard Ratings:

Health - 0, Flammability - 1, Reactivity - 0, Personal Protection - B

NFPA Hazard Ratings:

Health - 0, Flammability - 1, Reactivity (Stability) - 0

NOTE: HMIS and NFPA hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. The personal protection index is only intended for general guidance on personal protection equipment (PPE) that is suitable for the potential hazards of the material. PPE (e.g., respirators) may not be needed if engineering controls (e.g., local ventilation) are adequate. An asterisk (*), in the HMIS health field, designates potential chronic or target organ hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

4. FIRST-AID MEASURES

Inhalation: If symptomatic, move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Skin: Wash with soap and water. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.

Ingestion: Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Flood with water.

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

Hazardous Combustion Products: Carbon dioxide, carbon monoxide, oxides of nitrogen, oxides of sulfur. (see also Hazardous Decomposition Products section)

Unusual Fire and Explosion Hazards: Solution contains a strong reducing agent. Dried product residue can act as a reducing agent.

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. Collect in a noncombustible container for prompt disposal.

7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from combustible material. Remove and wash contaminated clothing promptly. Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups.

Storage: Keep container tightly closed to prevent the loss of water. Keep away from incompatible substances (see Incompatibility section). Do not store or ship together with combustible material. Store in original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):

Acetic acid: 10 ppm TWA; 15 ppm STEL

Sodium bisulfite: 5 mg/m³ TWA

Sodium tetraborate, decahydrate: 5 mg/m³ TWA

OSHA (USA) Permissible Exposure Limit (PEL - 1971 Table Z-1 Values):

Acetic acid: 10 ppm TWA

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Respiratory Protection: None should be needed. A respirator should be worn if hazardous decomposition products are likely to be or have been released. Respirator type: Acid gas. See Stability and Reactivity Section. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Eye Protection: It is a good industrial hygiene practice to minimize eye contact. Wear safety glasses with side shields (or goggles).

Skin Protection: It is a good industrial hygiene practice to minimize skin contact. Wear impervious gloves and protective clothing appropriate for the risk of exposure.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid

Color: Colorless

Odor: Vinegar

Specific Gravity (water = 1): 1.33

Vapor Pressure at 20°C (68°F): 24 mbar (18 mm Hg)

Vapor Density (Air = 1): 0.6

Volatile Fraction by Weight: 40-45%

Boiling Point: >100°C (>212°F)

Solubility in Water: Complete

pH: 5.3

Flash Point: None.

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: Strong oxidizing agents, strong acids, bases, sodium hypochlorite (bleach), combustible material, halogenated materials. Contact with base liberates flammable material.

Hazardous Decomposition Products: Ammonia, sulfur dioxide, chloramine.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

General: Contains sodium tetraborate. Based on repeated-dose ingestion studies in animals, may cause adverse reproductive effects. However, the doses administered were many times those to which humans would normally be exposed.

Inhalation: Expected to be a low hazard for recommended handling. In contact with strong acids or if heated, sulfites may liberate sulfur dioxide gas. Sulfur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

Eyes: No specific hazard known. May cause transient irritation.

Skin: May be absorbed in toxic amounts through damaged or abraded skin. This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

Ingestion: May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

12. ECOLOGICAL INFORMATION

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity

Fish LC50 mg/l:	>100
Daphnid EC50 mg/l:	>100
Algal IC50 mg/l:	>100

Organics Readily Degradable (>70%): Yes (7 days)

Potential Bioaccumulation: Log Pow <1

COD (approximate g/l): 323

BOD5 (approximate g/l): 261

Potential Toxicity

Waste treatment microorganisms EC50 (mg/l): >100

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Flush to sewer with large amounts of water. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

For transportation information regarding this product call the Kodak Worldwide Transportation Hazmat Hot Line: (585) 722-2400 between 8 a.m. and 5 p.m. (Eastern Standard Time), Monday through Friday.

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): bisulfites (3)
 - American Conference of Governmental Industrial Hygienists (ACGIH) (sodium bisulfite): not classifiable as a human carcinogen (A4)
 - 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: None

16. OTHER INFORMATION

US/Canadian Label Statements:

CONTAINS: Sodium bisulfite (007631-90-5); sodium tetraborate, decahydrate (001303-96-4); ammonium thiosulfate (007783-18-8); acetic acid (000064-19-7)

WARNING!

MAY BE HARMFUL IF SWALLOWED

MAY BE HARMFUL IF ABSORBED THROUGH SKIN

DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT. DRYING ON CLOTHING OR OTHER MATERIALS MAY CAUSE FIRE.

Keep container tightly closed to prevent the loss of water.

Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly.

Avoid breathing mist or vapor.

Avoid contact with eyes, skin, and clothing.

Use with adequate ventilation.

Wash thoroughly after handling.

FIRST AID: If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. In case of skin contact, immediately wash with soap and plenty of water. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get

medical attention if symptoms occur. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Wash contaminated 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.

IN CASE OF FIRE: Flood with water.

IN CASE OF SPILL: Absorb spill with inert material, then place in a chemical waste container. Flush residual spill or area with water. For large spills, dike for later disposal. Prevent runoff from entering drains, sewers, and streams.

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.

R-1, S-1, F-1, C-1

[please read the security and privacy notice](#)