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Material Safety Data Sheets

MSDS Product Name: KODAK Rapid Selenium Toner

MATERIAL SAFETY DATA SHEET

200001114/F/USA
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODAK Rapid Selenium Toner

Catalog Number(s): 146 4478 - 8 ounce(s)
 146 4486 - 1 quart (U.S.)
 140 0936 - 1 gallon (U.S.)

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

For Emergency Health, Safety & Environmental Information,

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

Synonym(s): KAN 354722; PCD 2667; J-0005.000

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

Concentrate:

55-60	Water (007732-18-5)
27	Ammonium thiosulfate (007783-18-8)
10-15	Sodium sulfite (007757-83-7)
2	Sodium selenite (010102-18-8)

Working solution:

80-90	Water (007732-18-5)
5-10	Ammonium thiosulfate (007783-18-8)
1-5	Sodium sulfite (007757-83-7)
< 1	Sodium selenite (010102-18-8)

3. HAZARDS IDENTIFICATION

Concentrate:

CONTAINS: Sodium selenite (010102-18-8); sodium sulfite (007757-83-7)
WARNING!
HARMFUL IF ABSORBED THROUGH SKIN OR SWALLOWED

HMIS Hazard Ratings:

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

NFPA Hazard Ratings:

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

Working solution:

CONTAINS: Sodium selenite (010102-18-8); sodium sulfite (007757-83-7)

WARNING!

MAY BE HARMFUL IF SWALLOWED

HMIS Hazard Ratings:

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

NFPA Hazard Ratings:

Health - 1, Flammability - 0, 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: Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur.

Skin:

Concentrate: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Working solution: Wash with soap and water. Get medical attention if symptoms occur.

Ingestion:

Concentrate: Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Working solution: Drink 1-2 glasses of water. Seek medical attention. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use appropriate agent for adjacent fire.

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

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

Unusual Fire and Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

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 from contact with oxidizing materials.

Storage: Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):

Sodium selenite, as Se: 0.2 mg/m³ TWA

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

Sodium selenite, as Se: 0.2 mg/m³ 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: Full-face positive-pressure air-supplied.

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

Skin Protection: 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: Characteristic mild

Specific Gravity (water = 1):

Concentrate: 1.32

Working solution: 1.10-1.12

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

Vapor Density (Air = 1): 0.6

Volatile Fraction by Weight:

Concentrate: 55-60%

Working solution: 80-90%

Boiling Point: >100°C (>212°F)

Solubility in Water: Complete

pH:

Concentrate: 9.0
Working solution: 8.8
Flash Point: None, noncombustible liquid

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility:

Concentrate: Bases, sodium hypochlorite (bleach), strong oxidizing agents, strong acids. Contact with base liberates flammable material.

Working solution: Bases, sodium hypochlorite (bleach), strong oxidizing agents, strong acids.

Hazardous Decomposition Products: Nitrogen oxides (NOx), sulfur dioxide, ammonia, chloramine

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

General: CONTAINS: Sodium selenite. Overexposure to selenium compounds may cause liver and kidney damage, neurological effects, fatigue, irritability, hair loss, skin lesions, nausea and vomiting, garlic odor of breath and sweat, and metallic taste.

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:

Concentrate: Harmful if absorbed through skin. This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

Working solution: This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

Ingestion:

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

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

Acute Toxicity Data:

Oral LD-50 (rat): 0.5-5.0 g/kg
Skin irritation: slight
Eye irritation: slight
Dermal LD-50: > 10 mL/kg

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. This material is a moderately alkaline aqueous solution, and this property may cause adverse environmental effects. 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 low potential to affect the growth of some plant seedlings, a high 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.

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal is subject to national, state, or local laws. Contract with a licensed chemical disposal agency. 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: (716) 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): 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: Selenium compounds (sodium selenite); Ammonium thiosulfate, (as chemical source of aqueous ammonia).

16. OTHER INFORMATION

US/Canadian Label Statements:

Concentrate:

CONTAINS: Sodium selenite (010102-18-8); sodium sulfite (007757-83-7)
WARNING!
HARMFUL IF ABSORBED THROUGH SKIN OR SWALLOWED

Avoid breathing mist or vapor.
Avoid contact with eyes, skin, and clothing.
Use with adequate ventilation.
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. Call a physician or poison control center immediately. In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. 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.

Working solution:

CONTAINS: Sodium sulfite (007757-83-7); sodium selenite (010102-18-8)

WARNING!

MAY BE HARMFUL IF SWALLOWED

Avoid breathing mist or vapor.
Avoid contact with eyes and prolonged or repeated contact with skin.
Use with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If swallowed, seek medical advice. Never give anything by mouth to an unconscious person.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

Keep out of reach of children.

For additional information, see Material Safety Data Sheet (MSDS) for this material.

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. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

R-1, S-2, F-0, C-0
WS:R-1, S-1, F-0, C-0



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