

Material Safety Data Sheet

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1. Identification of the substance/mixture and of the company/undertaking

Product name: KODAK Rapid Selenium Toner

Product code: 1464486

Supplier: Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email kes@kodak.com.

Synonyms: PCD 2667

Product Use: Toner, For industrial use only.

2. Hazards identification

CONTAINS: Ammonium thiosulphate (7783-18-8), Sodium sulphite (7757-83-7), Selenious acid, disodium salt (10102-18-8)

WARNING!

**DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT
HARMFUL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED
CAUSES EYE IRRITATION**

HMIS III Hazard Ratings: Health - 2, Flammability - 1, Physical Hazard - 0

NFPA Hazard Ratings: Health - 3, Flammability - 1, Instability - 0

NOTE: HMIS III and NFPA 704 (2007) 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. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

| Weight percent | Components - (CAS-No.) |
|----------------|--|
| 25 - 30 | Ammonium thiosulphate (7783-18-8) |
| 10 - 15 | Sodium sulphite (7757-83-7) |
| 1 - 5 | Selenious acid, disodium salt (10102-18-8) |

4. First aid measures

Inhalation: If inhaled, remove to fresh air. Get medical attention.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. If easy to do, remove contact lens, if worn.

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Skin: In case of contact, immediately flush 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 re-use. Destroy or thoroughly clean contaminated shoes.

Ingestion: If swallowed, DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately.

5. Fire-fighting measures

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Flush with plenty of 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 oxides, Sulphur oxides, nitrogen oxides (NOx), (see also Hazardous Decomposition Products sections.)

Unusual Fire and Explosion Hazards: Dried product residue can act as a reducing agent. Reacts violently with oxidizing materials. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

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.

For Large Spills: Flush with plenty of water.

7. Handling and storage

Personal precautions: Do not breathe mist or vapour at concentrations greater than the exposure limits. Use only with adequate ventilation. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

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

Storage: Store in original container. Keep container tightly closed to prevent the loss of water. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls

| Chemical Name | Regulatory List | Value Type | Value |
|-------------------------------|-----------------|-----------------------|-----------|
| Selenious acid, disodium salt | ACGIH | time weighted average | 0.2 mg/m3 |

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|-----------------|-------|---------------------------|---|
| | OSHA | time weighted average | <i>Expressed as Se</i> 0.2 mg/m ³ |
| Sulphur dioxide | ACGIH | Short term exposure limit | <i>Expressed as Se</i> 0.25 ppm |
| | OSHA | time weighted average | 5 ppm 13 mg/m ³ |

Ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: full-face positive-pressure air-supplied. 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 applicable federal, state, commonwealth, provincial, or local laws and regulations.

Eye protection: Wear safety glasses with side shields (or goggles).

Hand protection: Wear impervious gloves and protective clothing appropriate for the risk of exposure.

9. Physical and chemical properties

Physical form: liquid

Colour: colourless

Odour: characteristic, mild

Specific gravity: 1.32

Vapour pressure: 24 mbar (18.0 mm Hg)

Vapour density: 0.6

Boiling point/boiling range: > 100.0 °C (> 212.0 °F)

Water solubility: complete

pH: 9

Flash point: does not flash

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Acids, Strong bases, sodium hypochlorite (bleach), Halogenated compounds, Oxidizing agents. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with base liberates flammable material. Contact with base liberates ammonia. Contact with strong acids liberates sulphur dioxide.

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Hazardous decomposition products: Sulphur oxides, Ammonia, chloramine

Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure

General advice:

Contains: Selenious acid, disodium salt. The toxicological properties of this material have not been fully investigated and its handling and use may present additional hazards. 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: Harmful if inhaled. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

Eyes: Causes eye irritation.

Skin: 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.

Ingestion: 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 LD50 (rat): 400 - 800 mg/kg

- Oral LD50 (mouse): 1,600 - 3,200 mg/kg
- Dermal LD50 (guinea pig): > 5 mL/kg (highest dose tested)
- Skin irritation: slight

12. Ecological information

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

Potential Toxicity:

Toxicity to fish (LC50): > 100 mg/l

Toxicity to daphnia (EC50): 10 - 100 mg/l

Persistence and degradability: Readily biodegradable.

13. Disposal considerations

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Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

Not regulated for all modes of transportation.

For more transportation information, go to: www.kodak.com/go/ship.

15. Regulatory information

Notification status

| Regulatory List | Notification status |
|-----------------|---------------------|
| TSCA | All listed |
| DSL | All listed |
| NDSL | None listed |
| EINECS | All listed |
| ELINCS | None listed |
| NLP | None listed |
| AICS | All listed |
| IECS | All listed |
| ENCS | All listed |
| ECI | All listed |
| NZIoC | All listed |
| PICCS | All listed |

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

Other regulations

| | |
|--|---|
| American Conference of Governmental Industrial Hygienists (ACGIH): | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. |
| International Agency for Research on Cancer (IARC): | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| U.S. National Toxicology Program (NTP): | No component of this product present at levels greater than or equal to |

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| | 0.1% is identified as a known or anticipated carcinogen by NTP. |
| U.S. Occupational Safety and Health Administration (OSHA): | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |
| California Prop. 65 | WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. |
| U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances): | Selenious acid, disodium salt |
| U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities): | Selenious acid, disodium salt |
| U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting): | Ammonium thiosulphate, Selenious acid, disodium salt |
| U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances: | Selenious acid, disodium salt |
| U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens: | No components found on the California Specifically Regulated Carcinogens List. |
| U.S. - California - 8 CCR Section 5203 Carcinogens: | No components found on the California Section 5203 Carcinogens List. |
| U.S. - California - 8 CCR Section 5209 Carcinogens: | No components found on the California Section 5209 Carcinogens List. |
| U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law): | Ammonium thiosulphate, Selenious acid, disodium salt |
| U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances): | Selenious acid, disodium salt |
| U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1): | Selenious acid, disodium salt |
| U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A): | Water, Ammonium thiosulphate, Sodium sulphite, Selenious acid, disodium salt |

16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

US/Canadian Label Statements:

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WARNING! DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT. HARMFUL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED. CAUSES EYE IRRITATION.

Keep container tightly closed to prevent the loss of water. Keep from contact with clothing and other materials. Remove and wash contaminated clothing promptly. Do not breathe mist or vapour at concentrations greater than the exposure limits. Use only with adequate ventilation. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. **FIRST AID:** If inhaled, remove to fresh air. Get medical attention. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. If easy to do, remove contact lens, if worn. In case of contact, immediately flush 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 re-use. Destroy or thoroughly clean contaminated shoes. If swallowed, DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Flush with plenty of water. **IN CASE OF SPILL:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. For Large Spills: Flush with plenty of water. Additional Components Include: Water (7732-18-5).

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-2, S-2, F-1, C-1