

Material Safety Data Sheet



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

Product name: KODAK Rapid Selenium Toner

Product code: 1464486

Supplier: EASTMAN KODAK COMPANY, 343 State Street, Rochester, New York, 14650

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

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

Synonyms: PCD 2667

Product Use: Toner

2. Hazards identification

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

WARNING!

HARMFUL IF ABSORBED THROUGH SKIN OR SWALLOWED

CAUSES EYE IRRITATION

DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT.

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

NOTE: NFPA 704 (2007) hazard indexes involves data review and interpretation that may vary among companies. It is 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 %	Components - (CAS-No.)
55 - 60	Water (7732-18-5)
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 if symptoms occur.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

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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, only induce vomiting as directed by medical personnel. 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 section).

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. Collect in a noncombustible container for prompt disposal. Clean surface thoroughly to remove residual contamination.

For Large Spills: Flush with plenty of water.

7. Handling and storage

Personal precautions: Avoid breathing 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.

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,	ACGIH	time weighted average	0.2 mg/m3

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disodium salt		<i>Expressed as Se</i>	
	OSHA Z1	time weighted average	0.2 mg/m3
		<i>Expressed as Se</i>	
	OSHA Z1A	time weighted average	0.2 mg/m3
Sulphur dioxide	ACGIH	<i>Expressed as Se</i>	
	ACGIH	time weighted average	2 ppm
	ACGIH	Short term exposure limit	5 ppm
	OSHA Z1	Permissible exposure limit	5 ppm 13 mg/m3
Selenious acid, disodium salt	ACGIH	time weighted average	0.2 mg/m3
		<i>Expressed as Se</i>	
	OSHA Z1	time weighted average	0.2 mg/m3
		<i>Expressed as Se</i>	
	OSHA Z1A	time weighted average	0.2 mg/m3
Sulphur dioxide	ACGIH	<i>Expressed as Se</i>	
	ACGIH	time weighted average	2 ppm
	ACGIH	Short term exposure limit	5 ppm
	OSHA Z1	Permissible exposure limit	5 ppm 13 mg/m3
Selenious acid, disodium salt	ACGIH	time weighted average	0.2 mg/m3
		<i>Expressed as Se</i>	
	OSHA Z1	time weighted average	0.2 mg/m3
		<i>Expressed as Se</i>	
	OSHA Z1A	time weighted average	0.2 mg/m3
Sulphur dioxide	ACGIH	<i>Expressed as Se</i>	
	ACGIH	time weighted average	2 ppm
	ACGIH	Short term exposure limit	5 ppm
	OSHA Z1	Permissible exposure limit	5 ppm 13 mg/m3

Ventilation: Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. 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. 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

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Specific gravity: 1.32

Vapour pressure: 24 mbar (18.0 mm Hg)

Vapour density: 0.6

Volatile fraction by weight: 55 - 60 %

Boiling point/boilingrange: > 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.

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: Expected to be a low hazard for recommended handling. 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.

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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: 500 - 5,000 mg/kg
- Dermal LD50: > 10 mL/kg
- Skin irritation: slight
- Eye 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):	> 100 mg/l
Toxicity to algae (IC50):	> 100 mg/l
Toxicity to other organisms (EC50):	> 100 mg/l

Chemical Oxygen Demand (COD): 178 g/l

Biochemical Oxygen Demand (BOD): 150 g/l

13. Disposal considerations

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
EINECS	y (positive listing)
TSCA	y (positive listing)
AICS	y (positive listing)
DSL	y (positive listing)

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ENCS (JP)	n (Negative listing)
KECI (KR)	y (positive listing)
PICCS (PH)	y (positive listing)
INV (CN)	y (positive listing)

A N (Negative listing) 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):	Sodium sulphite: 3 (Classification not possible from current data.) (Inadequate data.) (Inadequate data.), Selenious acid, disodium salt: 3 (Classification not possible from current data.) (Inadequate data.) (Inadequate data.)
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 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:	none
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:	Selenious acid, disodium salt, Ammonium thiosulphate
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:	Ammonium thiosulphate, Selenious acid, disodium salt
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323):	Water, Ammonium thiosulphate, Sodium sulphite
US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000):	Ammonium thiosulphate
US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5):	Water, Ammonium thiosulphate, Sodium sulphite, Selenious acid, disodium salt

16. Other information

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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:

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

WARNING!

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

Keep container tightly closed to prevent the loss of water.
Keep from contact with clothing and other materials. Remove and wash contaminated clothing promptly.
Avoid prolonged or repeated breathing of mist or vapour.
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 if symptoms occur. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. 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, only induce vomiting as directed by medical personnel. 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. Collect in a noncombustible container for prompt disposal. Clean surface thoroughly to remove residual contamination. For Large Spills: Flush with plenty of water.

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

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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-1, C-1