

Material Safety Data Sheet



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

Product name: KODAK FLEXICOLOR Fixer and Replenisher

Product code: 1597392

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 5542

2. Hazards identification

CONTAINS: Ammonium thiosulphate (7783-18-8), Ammonium sulphite (10196-04-0), Sodium bisulphite (7631-90-5), Ammonium bisulphite (10192-30-0)

WARNING!

MAY BE HARMFUL IF 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.)
50 - 55	Ammonium thiosulphate (7783-18-8)
1 - 5	Ammonium sulphite (10196-04-0)
1 - 5	Sodium bisulphite (7631-90-5)
0.1 - 1	Ammonium bisulphite (10192-30-0)

4. First aid measures

Inhalation: If inhaled, move 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.

Skin: Wash off with soap and water. Get medical attention if symptoms persist.

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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 center 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, nitrogen oxides (NOx), sulphur oxides, (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

Methods for cleaning up: 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. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. 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
Sodium bisulphite	ACGIH	time weighted average	5 mg/m3
Sulphur dioxide	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

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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: None should be needed. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: Acid gas. 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).

Skin and body protection: For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Recommended Decontamination Facilities: Safety shower, eye wash, washing facilities as appropriate to condition of use.

9. Physical and Chemical Properties

Physical form: liquid

Colour: clear pale yellow

Odour: odourless

Specific gravity: 1.35

Vapour pressure (at 20.0 °C (68.0 °F)) : 24 mbar (18.0 mm Hg)

Vapour density: 0.6

Volatile fraction by weight: 35 - 40 %

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

Water solubility: complete

pH: 6.2

Flash point: does not flash

Flammability Limits: Not specified

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.

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Hazardous decomposition products: Ammonia, chloramine, sulphur oxides, nitrogen oxides (NO_x).

Hazardous Polymerization: Hazardous polymerization does not occur.

11. Toxicological information

Effects of Exposure

Inhalation: Expected to be a low hazard for recommended handling. Some asthmatics or hypersensitive individuals may experience difficulty breathing if exposed to aerosols or decomposition products that are not anticipated during normal use.

Eyes: Causes eye irritation.

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

Data for Ammonium thiosulphate (CAS 7783-18-8):

Acute Toxicity Data:

- Oral LD50 (male rat): 500 - 5,000 mg/kg

Data for Ammonium sulphite (CAS 10196-04-0):

Acute Toxicity Data:

- Oral LD50 (rat): 2,528 mg/kg
- Oral LD50: 1,904 mg/kg
- Oral LD50 (rat): 2,500 mg/kg (10% in water)
- Oral LD50 (mouse): 1,900 mg/kg (10% in water)
- Inhalation LC50 (rat): > 2.46 mg/l / 6 hr
- Dermal LD50: > 1,000 mg/kg
- Dermal LD50 (guinea pig): >1.0 g/kg
- Skin irritation: slight

Data for Sodium bisulphite (CAS 7631-90-5):

Acute Toxicity Data:

- Oral LD50 (rat): > 1,600 mg/kg

12. Ecological information

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

Potential Toxicity:

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

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Toxicity to daphnia (EC50): > 100 mg/l
Toxicity to algae (IC50): > 100 mg/l
Toxicity to other organisms (EC50): > 100 mg/l (sludge)

Persistence and degradability: Readily biodegradable

Chemical Oxygen Demand (COD): ca. 340 g/l

Biochemical Oxygen Demand (BOD): ca. 275 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	Other information	Not listed
EINECS	y (positive listing)	-	
TSCA	y (positive listing)	On TSCA Inventory	
AICS	y (positive listing)	-	
DSL	y (positive listing)	All components of this product are on the Canadian DSL list.	
ENCS (JP)	n (Negative listing)	-	Ammonium thiosulphate
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

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International Agency for Research on Cancer (IARC):	carcinogen by ACGIH. 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 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.
U.S. California Prop. 65:	none
US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323):	Ammonium thiosulphate, Water, Ammonium sulphite
US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000):	Ammonium thiosulphate, Ammonium sulphite
US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5):	Ammonium thiosulphate, Water, Ammonium sulphite, Sodium bisulphite
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, Ammonium bisulphite, Ammonium acetate
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR355, Appendix A):	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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:

CONTAINS: Ammonium thiosulphate (7783-18-8), Ammonium sulphite (10196-04-0), Sodium bisulphite (7631-90-5), Ammonium bisulphite (10192-30-0)

WARNING!
MAY BE HARMFUL IF SWALLOWED.
CAUSES EYE IRRITATION
DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT.

Avoid prolonged or repeated breathing of mist or vapour.
Avoid contact with eyes, skin, and clothing.
Keep container tightly closed to prevent the loss of water.
Keep from contact with clothing and other materials. Remove and wash contaminated clothing promptly.

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Use only with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If inhaled, move 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. Wash off with soap and water. Get medical attention if symptoms persist. 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.

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 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