

Safety Data Sheet

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Kodak alaris

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

Product name: KODAK Fixer, Working solution

Product code: 5160320 - Working solution

Synonyms: None.

Relevant identified uses of the substance or mixture and uses advised against:

Identified uses: photographic processing chemical (fixer). For industrial use only.

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 EHS-Questions@Kodakalaris.com.

2. Hazards identification

Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:

Hazard class	Hazard category	Route of exposure
Acute toxicity	Category 4	Oral

GHS-Labeling

Contains:

Sodium thiosulphate (7772-98-7), Aluminum ammonium sulfate (7784-25-0), Sodium bisulphite (7631-90-5)

Symbol(s):



Signal word: Warning

Hazard statements: Harmful if swallowed.

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Precautionary statements:

Prevention: Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Response: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

Other hazards which do not result in classification:

Dried product residue can act as a reducing agent.
The toxicological properties of this material have not been fully investigated and its handling and use may be hazardous.

HMIS III Hazard Ratings: Health - 1, 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.)
10 - 15	Sodium thiosulphate (7772-98-7)
1 - 5	Aluminum ammonium sulfate (7784-25-0)
1 - 5	Sodium bisulphite (7631-90-5)

4. First aid measures

Inhalation: If symptomatic, move to fresh air. Get medical attention if symptoms occur.

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.

Skin: IF ON SKIN: Wash with plenty of soap and water. Get medical attention if symptoms occur.

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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 centre immediately.

Most important symptoms and effects, both acute and delayed: No information available.

Indication of any immediate medical attention and special treatment needed:

Treatment: No information available.

5. Firefighting measures

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Flush with plenty of water.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: Carbon oxides, Sulphur oxides, Nitrogen oxides (NOx), (see also Hazardous Decomposition Products sections.)

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

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.

Methods and materials for containment and 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.

Environmental precautions: Flush with plenty of water.

For Large Spills: Flush with plenty of water.

7. Handling and storage

Precautions for safe handling

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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.

Conditions for safe storage, including any incompatibilities: 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

Appropriate engineering controls: 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.

Individual protection measures, such as personal protective equipment

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

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

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: 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.

9. Physical and chemical properties

Physical form: liquid

Colour: colourless

Odour: odourless

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Specific gravity: > 1

Vapour pressure: 24 mbar (18.0 mm Hg)

Vapour density: 0.6

Boiling point/boiling range: > 100 °C (> 212.0 °F)

Water solubility: complete

pH: 4.2 - 4.6

Flash point: does not flash

Evaporation rate: No data available

Flammability (Solid; gas): No data available

Upper explosion limit: No data available

Lower explosion limit: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

10. Stability and reactivity

Reactivity: No data available

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: No data available

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Incompatible materials: Acids, Halogenated compounds, Oxidizing agents, Strong bases, sodium hypochlorite (bleach). Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong acids may liberate sulphur dioxide.

Hazardous decomposition products: Sulphur oxides, Ammonia, Nitrogen oxides (NOx), chloramine

11. Toxicological information

Effects of Exposure

General advice:

Contains: Sodium thiosulphate. The toxicological properties of this material have not been fully investigated and its handling and use may present additional hazards. Expected to be a low health hazard for recommended handling.

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: No specific hazard known. May cause transient 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: Harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Data for Sodium thiosulphate (CAS 7772-98-7):

Acute Toxicity Data:

Oral LD50 (Rat): > 5,000 mg/kg

- Oral LD50 (male Rat): > 1,600 mg/kg
- Oral LD50 (Rat): > 8,000 mg/kg
- Skin irritation: slight

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

Acute Toxicity Data:

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

- Oral LD50 (Rat): 1,310 mg/kg
- Dermal LD50 (Rat): 2,000 mg/kg
- Eye irritation (May irritate eyes.): mild

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Carcinogenicity

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 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	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

Persistence and degradability: Readily biodegradable.

Chemical Oxygen Demand (COD): ca. 51 g/l

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Biochemical Oxygen Demand (BOD): ca. 40 g/l

Bioaccumulative potential

No data available

Mobility in soil

No information available.

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
TSCA	Not all listed
DSL	Not all listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	None listed
AICS	Not all listed
IECS	All listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	Not all listed
PICCS	All listed

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"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

U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Sodium bisulphite
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	No components of this product are subject to the SARA Section 302 (40 CFR 355) reporting requirements.
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Aluminum ammonium sulfate
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Sodium bisulphite
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):	Sodium bisulphite
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Sodium bisulphite
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Sodium bisulphite
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Sodium thiosulphate , Sodium bisulphite

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.

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US/Canadian Label Statements:

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Symbol(s):



Signal word: Warning

Hazard statements: Harmful if swallowed.

Precautionary statements:

Prevention: Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Response: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

FIRST AID: If symptomatic, move to fresh air. Get medical attention if symptoms occur. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur. **IF ON SKIN:** Wash with plenty of soap and water. Get medical attention if symptoms occur. 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.

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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-1, F-1, C-1