

Safety Data Sheet

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Kodak alaris

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

Product name: KODAK FLEXICOLOR SM Processing Unit F2/C-41SM Version 2.1, Bleach

Product code: 1173319 - Bleach

Synonyms: PCD 6317

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

Identified uses: photographic processing chemical (bleach/bleach 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
Serious eye damage	Category 1	--
Acute aquatic toxicity	Category 3	--
Chronic aquatic toxicity	Category 3	--

GHS-Labeling

Contains:

Ferric ammonium propylenediaminetetraacetic acid (111687-36-6), Succinic acid (110-15-6)

Symbol(s):



Signal word: Danger

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Hazard statements: Causes serious eye damage. Harmful to aquatic life with long lasting effects.

Precautionary statements:

Prevention: Avoid release to the environment. Wear eye protection/ face protection.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

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

HMIS III Hazard Ratings: Health - 3, Flammability - 1, Physical Hazard - 1

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

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	Ferric ammonium propylenediaminetetraacetic acid (111687-36-6)
1 - < 5	Succinic acid (110-15-6)

4. First aid measures

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

Eyes: Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility.

Skin: Wash off immediately with soap and plenty of water. Get medical attention if symptoms occur.

Ingestion: If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

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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: Water spray, Dry chemical, Carbon dioxide (CO₂), Foam.

Special hazards arising from the substance or mixture

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

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

Unusual Fire and Explosion Hazards: Fire or high temperatures may cause decomposition. Mixture contains an oxidizing material and may increase the burning rate of combustible materials. Dried product residue can act as an oxidizer.

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, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Prevent runoff from entering drains, sewers, or streams.

Environmental precautions: No information available.

7. Handling and storage

Precautions for safe handling

Personal precautions: Do not get in eyes, on skin, or on clothing. Do not breathe vapours or spray mist. Use only with adequate ventilation. 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.

Ventilation: Match ventilation rates to conditions of use so as not to exceed any applicable exposure limits (see Section 8).

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Conditions for safe storage, including any incompatibilities: Keep in a dry, cool and well-ventilated place. Cool conditions (5 - 30°C). Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Ferric ammonium propylenediaminetetraacetic acid	ACGIH	Time weighted average	1 mg/m ³
			<i>Expressed as Fe</i>

Appropriate engineering controls: 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.

Individual protection measures, such as personal protective equipment

Eye protection: Wear safety glasses with side shields (or goggles) and a face shield.

Hand protection: Wear protective gloves/ protective clothing.

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

Odour: odourless

Specific gravity: 1.16

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

Vapour density: 0.6

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

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Water solubility: complete

pH: 4

Flash point: > 93.33 °C (> 200.0 °F) (estimated)

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: Not fully evaluated. Materials containing similar structural groups can decompose if heated.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: No data available

Incompatible materials: Strong bases, sodium hypochlorite (bleach), Oxidizing agents, Metals, strong reducing agents, Combustible material, Strong oxidizing agents. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Material can react violently with combustible materials or strong reducing agents.

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Hazardous decomposition products: Carbon oxides, Ammonia, chloramine, hydrogen bromide, Nitrogen oxides (NOx), oxides of iron

11. Toxicological information

Effects of Exposure

General advice:

Contains: Ferric ammonium propylenediaminetetraacetic acid. This compound can chelate metals and may alter calcium and other cation balances.

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

Eyes: Causes serious eye damage.

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

Ingestion: Expected to be a low ingestion hazard.

Data for Ferric ammonium propylenediaminetetraacetic acid (CAS 111687-36-6):

Acute Toxicity Data:

Oral LD50 (male Rat): 2,828 mg/kg

- Oral LD50 (female Rat): 4,000 mg/kg
- Skin irritation: slight
- Skin Sensitization: none
- Eye irritation (unwashed eyes): slight
- Eye irritation (washed eyes): none

Mutagenicity/Genotoxicity Data:

- Salmonella-E. coli/Mammalian-Microsome Reverse Mutation Assay (TA1535, TA1537, TA1538, TA98, TA100): negative (in presence and absence of activation)
- CHO/HGPRT assay: positive (in presence of activation)
- CHO/HGPRT assay: negative (in absence of activation)
- Mouse lymphoma assay: negative (in presence and absence of activation)

Data for Succinic acid (CAS 110-15-6):

Acute Toxicity Data:

Oral LD50 (Rat): 2,260 mg/kg

- Oral LD50 (Rat): 2,260 mg/kg
- Eye irritation: severe

Carcinogenicity

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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):	Group 2A - Probably Carcinogenic to Humans: Ammonium nitrate
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):	OSHA Carcinogen or Potential Carcinogen: Ammonium nitrate
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):	10 - 100 mg/l estimated
Toxicity to daphnia (EC50):	10 - 100 mg/l estimated

Persistence and degradability: Not readily biodegradable.

This product has not been tested for environmental effects.

Bioaccumulative potential

No data available

Mobility in soil

No information available.

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	Not all listed
ELINCS	Listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed
TCSI	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.
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International Agency for Research on Cancer (IARC):	Group 2A - Probably Carcinogenic to Humans: Ammonium nitrate
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):	OSHA Carcinogen or Potential Carcinogen: Ammonium nitrate
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.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	No components of this product are subject to the SARA Section 302 (40 CFR 302.4) reporting requirements.
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):	Ferric ammonium propylenediaminetetraacetic acid , Ammonium nitrate , Ammonium bromide
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Ferric ammonium propylenediaminetetraacetic acid
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 nitrate , Ammonium bromide
U.S. - Minnesota Employee Right-to-Know (5206.0400,	Ferric ammonium

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Subpart 5. List of Hazardous Substances):	propylenediaminetetraacetic acid
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Ammonium nitrate
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Ferric ammonium propylenediaminetetraacetic acid , Ammonium nitrate , Ammonium bromide , Succinic acid

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:

KODAK FLEXICOLOR SM Processing Unit F2/C-41SM Version 2.1, Bleach

Contains:

Ferric ammonium propylenediaminetetraacetic acid (111687-36-6), Succinic acid (110-15-6)

Symbol(s):



Signal word: Danger

Hazard statements: Causes serious eye damage. Harmful to aquatic life with long lasting effects.

Precautionary statements:

Prevention: Avoid release to the environment. Wear eye protection/ face protection.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

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

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FIRST AID: If inhaled, remove to fresh air. Get medical attention. Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility. Wash off immediately with soap and plenty of 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. Get medical attention 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:** Water spray, Dry chemical, Carbon dioxide (CO₂), Foam. **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. Prevent runoff from entering drains, sewers, or streams.

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-3, F-1, C-1T