

# Safety Data Sheet

Revision Date: 06/13/2016  
000000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 1/11

# 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, Fixer

**Product code:** 1173319 - Fixer

**Synonyms:** PCD 6467

**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](mailto:EHS-Questions@Kodakalaris.com).

## 2. Hazards identification

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

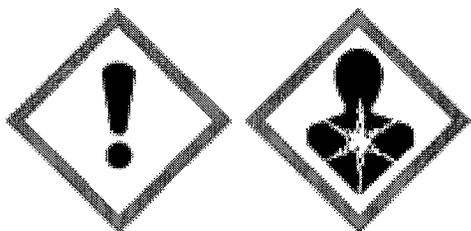
Hazard class	Hazard category	Route of exposure
Eye irritation	Category 2A	--
Specific target organ toxicity - single exposure	Category 1	--

### GHS-Labeling

**Contains:**

Ammonium thiocyanate (1762-95-4)

**Symbol(s):**



**Signal word:** Danger

# Safety Data Sheet

Revision Date: 06/13/2016  
000000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 2/11

---

**Hazard statements:** Causes serious eye irritation. Causes damage to organs. (thyroid gland.)

**Precautionary statements:**

**Prevention:** Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. 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. If eye irritation persists: Get medical advice/ attention. IF exposed or concerned: Call a POISON CENTER or doctor/ physician. Specific treatment (see supplemental first aid instructions on this label).

**Storage:** Store locked up.

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

**HMIS III Hazard Ratings:** Health - 4, Flammability - 0, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 2, Flammability - 0, 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.)
15 - 20	Ammonium thiocyanate (1762-95-4)
0.1 - 1	Sodium bisulphite (7631-90-5)

### 4. First aid measures

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

**Eyes:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention.

**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.

# Safety Data Sheet

Revision Date: 06/13/2016  
000000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 3/11

---

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

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** Contact with a strong oxidizer or acid may liberate hydrogen cyanide gas. In the event that hydrogen cyanide gas is released, the local emergency ambulance/resuscitation service or physician should be informed that the patient may have been exposed to hydrogen cyanide gas.

## 5. Firefighting measures

**Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment..

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, (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:** 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

**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:** Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapour. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

# Safety Data Sheet

Revision Date: 06/13/2016  
000000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 4/11

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

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

**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
Ammonium thiocyanate	OSHA	Time weighted average	5 mg/m3 <i>Expressed as CN prevent or reduce skin absorption</i>
Ammonium thiocyanate		Time weighted average	5 mg/m3 <i>Expressed as CN prevent or reduce skin absorption</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).

**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:** clear

## Safety Data Sheet

Revision Date: 06/13/2016  
000000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 5/11

---

**Odour:** ammonia

**Specific gravity:** 1.18

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

**Vapour density:** 0.6

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

**Water solubility:** complete

**pH:** 7.5

**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.

# Safety Data Sheet

Revision Date: 06/13/2016  
00000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 6/11

---

**Conditions to avoid:** No data available

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

**Hazardous decomposition products:** Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, Ammonia, chloramine, carbonyl sulfide, cyanides

## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Ammonium thiocyanate. Overexposure to thiocyanates has been shown to cause thyroid enlargement, decrease in metabolic rate, and symptoms of hypothyroidism in humans and animals.

**Inhalation:** May be 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 serious eye damage.

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

**Ingestion:** Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

#### Data for Ammonium thiocyanate (CAS 1762-95-4):

##### Acute Toxicity Data:

Oral LD50 (Rat): 750 mg/kg

- Dermal LD50 (Guinea pig): 0.25 - 0.5 g/kg
- Skin irritation: moderate
- Eye irritation (unwashed eyes): moderate

#### 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

## Safety Data Sheet

Revision Date: 06/13/2016  
00000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 7/11

---

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

### 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):	OSHA Carcinogen or Potential Carcinogen: Sodium acetate
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 estimated
Toxicity to daphnia (EC50):	> 100 mg/l estimated

**Persistence and degradability:** Readily biodegradable

This product has not been tested for environmental effects.

#### Bioaccumulative potential

No data available

# Safety Data Sheet

Revision Date: 06/13/2016  
000000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 8/11

---

## 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](http://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	Not all listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	Not all listed
PICCS	Not all listed
TCSI	Not 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.

## Safety Data Sheet

Revision Date: 06/13/2016  
000000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 9/11

---

### 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 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: Sodium acetate
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):	Ammonium thiocyanate , Ammonium sulphite
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):	Ammonium thiosulphate , Ammonium thiocyanate , Ammonium sulphite
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Ammonium thiocyanate , Ammonium sulphite
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

## Safety Data Sheet

Revision Date: 06/13/2016  
000000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 10/11

	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 , Ammonium thiocyanate , Ammonium sulphite
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	No components found on the Minnesota Employee Right-to-Know List of Hazardous Substances.
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Ammonium thiocyanate , Ammonium sulphite
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Ammonium thiosulphate , Ammonium thiocyanate , Ammonium sulphite , 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.

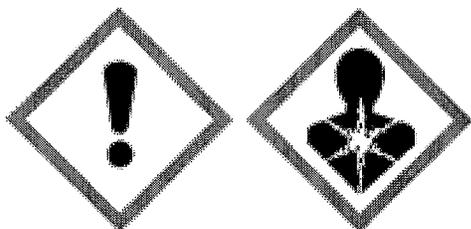
#### US/Canadian Label Statements:

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

##### Contains:

Ammonium thiocyanate (1762-95-4)

##### Symbol(s):



**Signal word:** Danger

**Hazard statements:** Causes serious eye irritation. Causes damage to organs. (thyroid gland.)

**Precautionary statements:**

## Safety Data Sheet

Revision Date: 06/13/2016  
000000009258/Version: 3.0  
Print Date: 06/23/2016  
Page: 11/11

---

**Prevention:** Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. 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. If eye irritation persists: Get medical advice/ attention. IF exposed or concerned: Call a POISON CENTER or doctor/ physician. Specific treatment (see supplemental first aid instructions on this label).

**Storage:** Store locked up.

**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 persist. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention. 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. **Note to Physicians:** Contact with a strong oxidizer or acid may liberate hydrogen cyanide gas. In the event that hydrogen cyanide gas is released, the local emergency ambulance/resuscitation service or physician should be informed that the patient may have been exposed to hydrogen cyanide gas. 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 extinguishing measures that are appropriate to local circumstances and the surrounding environment.. **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-2, F-1, C-1