

# MATERIAL SAFETY DATA SHEET

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

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

**Product code:** 1173319 - Bleach

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

**Supplier:** KODAK AUSTRALASIA Pty. Ltd., 181 Victoria Parade, Collingwood, Victoria, 3066

For Chemical Emergency Information, in Australia call 1800 033111 (24 hour service Australia-wide); in New Zealand call 0800 734 607 (24 hour service); in Asia call +86 21 63500836

For Other Information, call 61 3 8417 8000.

**Synonyms:** PCD 6317

**Product Use:** Professional colour film photographic processing solution

## 2. Hazards identification

**STATEMENT OF HAZARDOUS NATURE:** Hazardous according to criteria of NOHSC

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Contains no scheduled poisons

## 3. Composition/information on ingredients

| Weight % | Components (CAS-No.)   |
|----------|--|
| 65 - 70  | Water (7732-18-5)  |
| 10 - 15  | Ferric ammonium propylenediaminetetraacetic acid (111687-36-6) |
| 5 - 10   | Ammonium nitrate (6484-52-2)                                   |
| 5 - 10   | Ammonium bromide (12124-97-9)                                  |
| 5 - 10   | Succinic acid, monoammonium salt (38457-08-8)                  |
| 1 - 5    | Succinic acid (110-15-6)                                       |

## 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 occur.

**Ingestion:** Get medical attention if symptoms occur.

**Notes to physician:**

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**Symptoms:** If signs and symptoms of cyanosis are present, treat for methemoglobinemia.

## 5. Fire-fighting measures

**Hazchem Code:** 2X

**Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**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), (see also Hazardous Decomposition Products section).

**Unusual Fire and Explosion Hazards:** Fire or high temperatures may cause decomposition.

## 6. Accidental release measures

Absorb spill with inert material, then place in a chemical waste container. Contaminated absorbent should be disposed of in accordance with local regulations. Clean surface thoroughly to remove residual contamination.

## 7. Handling and storage

**Personal precautions:** Avoid prolonged or repeated breathing of mist or vapour. Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation. Wash thoroughly after handling.

**Prevention of Fire and Explosion:** Keep away from heat and sources of ignition. Keep from contact with oxidizing materials.

**Storage:** Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls / personal protection

**Occupational exposure controls:** Not established

**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:** None should be needed.

**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

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**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

**Volatile fraction by weight:** 65 - 70 %

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

**Water solubility:** complete

**pH:** 4

**Flash point:** does not flash

**Flammability Limits:** Not specified

## 10. Stability and reactivity

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

**Incompatibility:** strong bases, sodium hypochlorite (bleach), oxidizing agents. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

**Hazardous decomposition products:** ammonia, chloramine, hydrogen bromide, nitrogen oxides (NO<sub>x</sub>).

**Hazardous Polymerization:** Hazardous polymerization does not occur.

## 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.

Contains: Ammonium nitrate. Under some circumstances methemoglobinemia may occur when nitrates are converted by bacteria in the stomach to nitrites.

Contains: Succinic acid, monoammonium salt. The toxicological properties of this material have not been evaluated. The following information is based on the toxicological properties of a structurally similar material.

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

**Eyes:** No specific hazard known. May cause transient irritation.

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**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)

## 12. Ecological information

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

Potential Toxicity:

Fish LC50: > 100 mg/l

Daphnid EC50: > 100 mg/l

Algal IC50: 10 - 100 mg/l

Waste treatment organisms EC50: > 100 mg/l

Organics Readily Degradable: Not readily biodegradable

Potential Bioaccumulation: log Pow < 1

COD (approximate): 281 g/l

BOD (approximate): 39 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

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of

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manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

|              |                       |  |
|--------------|-----------------------|--|
| <b>ADG:</b>  | UN Number:            | UN3264   |
|              | Proper shipping name: | Corrosive liquid, acidic, inorganic, n.o.s. (Ammonium bromide) |
|              | Class:                | 8  |
|              | Packaging group:      | III  |
| <b>IATA:</b> | UN Number:            | UN3264   |
|              | Proper shipping name: | Corrosive liquid, acidic, inorganic, n.o.s. (Ammonium bromide) |
|              | Class:                | 8  |
|              | Packaging group:      | III  |
| <b>IMDG:</b> | UN Number:            | UN3264   |
|              | Proper shipping name: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Ammonium bromide) |
|              | Class:                | 8  |
|              | Packaging group:      | III  |

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

## 15. Regulatory information

**Poisons Schedule:** Not specified

### **Carcinogenicity Classification (components present at 0.1% or more):**

International Agency for Research on Cancer (IARC): none  
American Conference of Governmental Industrial Hygienists (ACGIH): none  
U.S. National Toxicology Program (NTP): none  
U.S. Occupational Safety and Health Administration (OSHA): none  
Worksafe Australia: none

## 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. The actual label information will depend upon the intended use of the product. Worksafe Australia labeling appears for commercial/industrial use.

### **Worksafe Australia Labeling:**

**Contains:** Ferric ammonium propylenediaminetetraacetic acid 10 - 15%

**pH:** 3 - 6

**Risk Phrases:** R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety Phrases:** S60: This material and its container must be disposed of as hazardous waste.

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**National Health and Medical Research Council Standard for the Uniform Scheduling of Drugs and Poisons Labeling:**

**CONTAINS NO SCHEDULED POISONS**

**First aid:** No first aid instructions are recommended for labelling purposes.

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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.

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R-1, S-2, F-1, C-1T