

Material Safety Data Sheet

Revision Date: 30.01.2012
Print Date: 19.03.2012
000000009258/Version: 3.2
Page: 1/7



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: 6601462 - Fixer

Supplier: KODAK AUSTRALASIA Pty. Ltd., Level 2, 436 Johnston Street, Abbotsford, Victoria, 3067

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 6467

Product Use: photographic processing chemical (fixer), For industrial use only.

2. Hazards identification

STATEMENT OF HAZARDOUS NATURE: Hazardous according to criteria of Australian Safety and Compensation Council

May cause long-term adverse effects in the aquatic environment.

Poisons Schedule: 5

Contains: Ammonium thiocyanate

3. Composition/information on ingredients

Weight percent	Components (CAS-No.)
15 - 20	Ammonium thiosulphate (7783-18-8)
15 - 20	Ammonium thiocyanate (1762-95-4)
1 - 5	Ammonium sulphite (10196-04-0)
1 - 5	Sodium sulphite (7757-83-7)
0.1 - 1	Sodium bisulphite (7631-90-5)

4. First aid measures

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

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

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

Material Safety Data Sheet

Revision Date 30.01.2012
Print Date: 19.03.2012
000000009258/Version: 3.2
Page: 2/7

Notes to physician:

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. Fire-fighting measures

Hazchem Code: Not specified

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 sections.)

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

Absorb spill with vermiculite or other inert material. Collect in a noncombustible container for prompt disposal. Contaminated absorbent should be disposed of in accordance with local regulations. Clean surface thoroughly to remove residual contamination. Flush with plenty of water.

7. Handling and storage

Personal precautions: Do not breathe vapours or spray mist. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling.

Cleaning Precautions: If accidentally mixed with a strong oxidizer or acid, do not breathe gas. DO NOT add cleaning agents to processor tanks unless the tank and recirculation lines have been completely drained and thoroughly rinsed with water. The addition of concentrated cleaning agents, e.g. chlorine containing bleaches, to control biological growth or clean tanks may liberate hazardous gases. For information on the recommended methods for cleaning processing tanks, contact the Kodak Customer Assistance Center at (800) 242-2424. For information on controlling biological growth, request a copy of the KODAK Publication CIS-3, Biocides for Photographic Solution Tanks and Wash Water.

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: Keep away from acids. 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
---------------	-----------------	------------	-------

Material Safety Data Sheet

Revision Date 30.01.2012
Print Date: 19.03.2012
000000009258/Version: 3.2
Page: 3/7

Ammonium thiocyanate	Exposure Standards	time weighted average	5 mg/m ³
			<i>Expressed as CN skin notation</i>
Sulphur dioxide		time weighted average	2 ppm 5.2 mg/m ³
		Short term exposure limit	5 ppm 13 mg/m ³
Sulphur dioxide	New Zealand	time weighted average	2 ppm 5.2 mg/m ³
		Short term exposure limit	5 ppm 13 mg/m ³

Ventilation: 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.

Respiratory protection: If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. Respirator type: N95 Particulate Filter. However in the unlikely event that hazardous decomposition products are released, emergency response personnel must wear a full-face positive-pressure air supplied respirator. Respirator type: full-face positive-pressure air-supplied. 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).

Hand protection: Wear impervious gloves and protective clothing appropriate for the risk of exposure.

9. Physical and chemical properties

Physical form: liquid

Colour: clear

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

Flammability Limits: Not specified

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: 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 Safety Data Sheet

Revision Date 30.01.2012
Print Date: 19.03.2012
000000009258/Version: 3.2
Page: 4/7

material. Contact with base liberates ammonia. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

Hazardous decomposition products: Ammonia, chloramine, Sulphur oxides, carbonyl sulfide, cyanides.

Hazardous Polymerization: Hazardous polymerisation does not occur.

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: Expected to be a low hazard for recommended handling. 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: No specific hazard known. May cause transient irritation.

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

Ingestion: Expected to be a low hazard for recommended handling. May cause irritation of the gastrointestinal tract. 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

- Eye irritation: none

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

Acute Toxicity Data:

Oral LD50 (male rat): 500 - 1,000 mg/kg

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

Data for Sodium sulphite (CAS 7757-83-7):

Acute Toxicity Data:

Oral LD50 (rat): 820 mg/kg

- Inhalation LC50 (rat): > 22 mg/l / 1 hr
- Inhalation LC50 (rat): > 5.5 mg/l / 4 hr
- Skin irritation: none
- Eye irritation: slight; washing palliative

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

Material Safety Data Sheet

Revision Date 30.01.2012
Print Date: 19.03.2012
000000009258/Version: 3.2
Page: 5/7

Acute Toxicity Data:

Oral LD50 (rat): 2,528 mg/kg

- Inhalation LC50 (rat): > 2.46 mg/l / 6 hr
- 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

- Eye irritation: Irritating to eyes.

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

Persistence and degradability: Readily biodegradable.

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	Not all listed
ENCS	Not all listed

Material Safety Data Sheet

Revision Date 30.01.2012
Print Date: 19.03.2012
000000009258/Version: 3.2
Page: 6/7

ECI	Not all listed
NZIoC	Not all listed
PICCS	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.

Poisons Schedule: 5

Australian Safety and Compensation Council: none

Other regulations

Australia National Model Regulations for the Control of
Scheduled Carcinogenic Substances

Components listed: Sodium acetate

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. Australian Safety and Compensation Council labeling appears for commercial/industrial use.

Australian Safety and Compensation Council Labeling:

pH: 6 - 9

Risk Phrases:

R53: May cause long-term adverse effects in the aquatic environment.

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

CAUTION
NOT TO BE TAKEN
DO NOT SWALLOW
KEEP OUT OF REACH OF CHILDREN

Contains: Ammonium thiocyanate (181.838 g/L)

First aid: For advice, contact a Poisons Information Centre (Australia 13 1126; New Zealand 0800 764 766) or a doctor.

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.

Material Safety Data Sheet

Revision Date 30.01.2012
Print Date: 19.03.2012
000000009258/Version: 3.2
Page: 7/7

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