

Material Safety Data Sheet

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

Product name: KODAK FLEXICOLOR SM Tank Fixer / C-41SM

Product code: 8462681

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 6022

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

2. Hazards identification

STATEMENT OF HAZARDOUS NATURE: Not classified as hazardous according to criteria of Australian Safety and Compensation Council

Contains no scheduled poisons

3. Composition/information on ingredients

Weight %	Components (CAS-No.)
10 - 15	Ammonium thiosulphate (7783-18-8)
5 - 10	Ammonium thiocyanate (1762-95-4)
1 - 5	Sodium sulphite (7757-83-7)
0.1 - 1	Ammonium sulphite (10196-04-0)
0.1 - 1	Ammonium acetate (631-61-8)

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. Get medical attention. If easy to do, remove contact lens, if worn.

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. Call a physician or poison control centre immediately.

5. Fire-fighting measures

Hazchem Code: Not specified

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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. Clean surface thoroughly to remove residual contamination. Flush with plenty of water.

7. Handling and storage

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.

Storage: Keep away from acids. 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
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	WEL	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: Respirator type: Acid gas/N95 Particulate Filter. None should be needed under normal conditions of use. However in the unlikely event that hazardous decomposition products are released, emergency response personnel must wear a full-face positive-pressure air supplied respirator. 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.

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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: light yellow

Odour: slight vinegar

Specific gravity: 1.090

Vapour pressure: 24 mbar (18.0 mm Hg)

Vapour density: 0.6

Volatile fraction by weight: 75 - 80 %

Water solubility: complete

pH: 6.5

Flash point: does not flash

Flammability Limits: Not specified

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Acids, Strong bases, sodium hypochlorite (bleach), Halogenated compounds, Oxidizing agents, Combustible material, sulfuric acid Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with base liberates flammable material. Contact with base liberates ammonia. Contact with strong acids liberates sulphur dioxide. Contact with strong oxidizing agents e.g. sodium hypochlorite (bleach) or strong acids may liberate cyanides or carbonyl sulphide. Contact with strong oxidizing agents or acids liberates toxic and flammable gas.

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

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

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 ingestion hazard.

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): > 1,600 mg/kg

- 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):

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

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 (sludge)

Persistence and degradability: Readily biodegradable.

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Chemical Oxygen Demand (COD): ca. 83 g/l

Biochemical Oxygen Demand (BOD): ca. 45 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

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	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	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: Not specified

Australian Safety and Compensation Council: none

Other regulations

Australia National Model Regulations for the Control of Scheduled Carcinogenic Substances No components listed

16. Other information

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Australian Safety and Compensation Council Labeling:

Not classified as hazardous according to criteria of Australian Safety and Compensation Council

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.

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