Material Safety Data Sheet

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

Product name: KODAK FLEXICOLOR SM Tank Developer / C-41SM, Part C

Product code: 1756337 - Part C

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 6038

Product Use: photographic processing chemical (developer/activator), For industrial use only.

2. Hazards identification

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

Harmful. Harmful if swallowed. Harmful: danger of serious damage to health by prolonged exposure if swallowed. May cause sensitization by skin contact.

Contains no scheduled poisons

3. Composition/information on ingredients

Weight percent	Components (CAS-No.)
15 - 20	4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate (25646-77-9)
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, DO NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person.

5. Fire-fighting measures

Hazchem Code: 2X

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use water spray to cool unopened containers.

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: Elevated temperature can cause decomposition.

6. Accidental release measures

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

7. Handling and storage

Personal precautions: Do not breathe mist or vapour at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. 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 away from heat and sources of ignition. Keep from contact with oxidizing materials.

Storage: Store in cool place. Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls: Not established

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 below recommended exposure limits, an approved respirator must be worn. Respirator type: acid gas 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: reddish-brown

Odour: sulphur dioxide

Specific gravity: 1.06

Vapour pressure: 24 mbar (18.0 mm Hg)

Vapour density: 0.6

Boiling point/boiling range: > 35 °C (> 95.0 °F) (estimated)

Water solubility: complete

pH: 2.4

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

Flammability Limits: Not specified

10. Stability and reactivity

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

Incompatibility: Strong oxidizing agents, Acids, Metals Contact with strong acids may liberate sulphur dioxide.

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

Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure

General advice:

Contains: 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate. May cause kidney damage based on animal data.

Inhalation: Expected to be a low hazard for recommended handling. Liberates sulphur dioxide gas which can cause irritation to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficulty breathing.

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

Skin: May cause sensitization by skin contact.

Ingestion: Harmful if swallowed. Harmful: danger of serious damage to health by prolonged exposure if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Data for 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate (CAS 25646-77-9):

Acute Toxicity Data:

Oral LD50 (male rat): 25 - 50 mg/kg (target organ effects: kidney)

- Oral LD50 (female rat): 30 mg/kg (target organ effects: kidney)
- Inhalation LC50 (rat): > 0.164 mg/l / 6 hr
- Dermal absorption rate (rat): 93.7 microgram(s)/cm2/hour (in vitro)

- Dermal LD50 (guinea pig): > 2,000 mg/kg
- Skin irritation: moderate
- Skin Sensitization (human): positive
- Skin Sensitization (guinea pig): moderate to strong
- Eye irritation (unwashed eyes): moderate

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

Repeated dose toxicity:

- Oral (4 weeks, female rat): NOEL; 1 mg/kg/day
- Oral (4 weeks, female rat): Lowest observable effect level; 10 mg/kg/day (target organ effects: kidney)
- Oral (4 weeks, male rat): NOEL; 10 mg/kg/day
- Oral (4 weeks, male rat): Lowest observable effect level; > 10 mg/kg/day (target organ effects: kidney)
- Oral (90 days, rat): NOEL; 1 mg/kg/day
- Oral (90 days, rat): Lowest observable effect level; 5 mg/kg/day (target organ effects: kidney)

Data for Sodium bisulphite (CAS 7631-90-5):

Acute Toxicity Data:

Oral LD50 (rat): > 1,600 mg/kg

- Eye irritation (May irritate eyes.): mild

12. Ecological information

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

Potential Toxicity:

Toxicity to fish (LC50):	1 - 10 mg/l
Toxicity to daphnia (EC50):	1 - 10 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

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 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.

ADG:	UN number:	UN2922
	Proper shipping name:	CORROSIVE LIQUID, TOXIC, N.O.S. (4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate)

	Class:	8
	Sub-risks:	6.1
	Packaging group:	III
IATA:	UN number:	UN2922
	Proper shipping name:	CORROSIVE LIQUID, TOXIC, N.O.S. (4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate)
	Class:	8
	Sub-risks:	6.1
	Packaging group:	III
IMDG:	UN number:	UN2922
	Proper shipping name:	CORROSIVE LIQUID, TOXIC, N.O.S. (4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate)
	Class:	8
	Sub-risks:	6.1
	Packaging group:	III

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

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:

Contains: 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate 15 - 20%

pH: 1 - 3

Symbol/Indication of Danger:	Xn: Harmful
Risk Phrases:	R22: Harmful if swallowed. R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed. R43: May cause sensitization by skin contact.
Safety Phrases:	S24: Avoid contact with skin. S36/37: Wear suitable protective clothing and gloves. S57: Use appropriate container to avoid environmental contamination.

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

CONTAINS NO SCHEDULED POISONS
Safety Phrases: Avoid contact with skin or eyes. Avoid breathing dust (or) vapour (or) spray mist.

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.