

MATERIAL SAFETY DATA SHEET

Revision Date: 03/22/2005
Z17000000133/Version: 1.4
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1. Identification of the substance/preparation and of the company/undertaking

Product name: KODAK PROFESSIONAL Color Developer Replenisher, Process E-6AR, Part A

Product code: 8402224 - Part A

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

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

For Emergency Health, Safety & Environmental Information, call (585) 722-5151 (USA)

For other information or to request an MSDS, call (800) 242-2424.

Synonyms: PCD 6439

2. Hazards identification

CONTAINS: Sodium sulphite (7757-83-7), Tripotassium phosphate (7778-53-2), Potassium hydroxide (1310-58-3)

WARNING!

CAUSES EYE BURNS

HARMFUL IF SWALLOWED

MIST IRRITATING TO THE EYES AND RESPIRATORY TRACT

HMIS II Hazard Ratings:

Health - 3, Flammability - 0, Reactivity (Stability) - 0

NFPA Hazard Ratings:

Health - 3, Flammability - 0, Instability - 0

NOTE: HMIS II and NFPA 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. An asterisk (*), in the HMIS II health field, designates potential chronic or target organ hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

Weight %	Components (CAS-No.)
80 - 85	Water (7732-18-5)
10 - 15	Tripotassium phosphate (7778-53-2)
1 - 5	Sodium sulphite (7757-83-7)
1 - 5	(Nitrilotris(methylene))trisphosphonic acid pentasodium salt (2235-43-0)
1 - 5	Potassium hydroxide (1310-58-3)

4. First aid measures

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Inhalation: If symptomatic, move to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: Wash off with soap and water. Get medical attention if symptoms occur.

Ingestion: If swallowed, do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Notes to physician:

Treatment: Strong alkalis bind tissue protein. Following initial flushing of the eye with water, continued irrigation of the eye with saline is recommended. Treatment should be continued until pH of tears reaches neutral.

5. Fire-fighting measures

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

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

Hazardous Combustion Products: None (noncombustible) (see also Hazardous Decomposition Products section).

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Methods for cleaning up: Absorb spill with inert material, then place in a chemical waste container. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

Personal precautions: Do not get in eyes. Avoid prolonged or repeated contact with skin. Avoid breathing mist. Use with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: No special technical protective measures required.

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

8. Exposure controls / personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
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Potassium hydroxide ACGIH Ceiling Limit Value: 2 mg/m3

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: It is a good industrial hygiene practice to minimize skin contact. 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

Colour: light yellow

Odour: odourless

Specific gravity: 1.19

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

Vapor density (air = 1): 0.6

Volatile fraction by weight: 80 - 85 %

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

Water solubility: complete

pH: 13.8

Flash point: None.

10. Stability and reactivity

Stability: Stable

Incompatibility: acids.

Hazardous decomposition products: oxides of phosphorus.

Hazardous Polymerization: Hazardous polymerization does not occur.

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11. Toxicological information

Effects of Exposure

Inhalation: Expected to be a low hazard for recommended handling. Mist irritating. 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 eye burns. Mist irritating.

Skin: This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported. Prolonged or repeated skin contact may cause irritation.

Ingestion: Harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Acute Toxicity Data:

- Skin irritation: (4-hour DOT Skin Corrosivity Test, negative)

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: > 100 mg/l

Waste treatment organisms EC50: > 100 mg/l

Organics Readily Degradable: Not readily biodegradable

Potential Bioaccumulation: $\log P_{ow} < 1$

COD (approximate): 11 g/l

BOD (approximate): 4 g/l

13. Disposal considerations

Discharge, treatment, or disposal is subject to national, state, provincial, or municipal laws. Contract with a licensed chemical disposal agency. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

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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.

US DOT: UN Number: UN1814
Proper shipping name: Potassium hydroxide, solution
Class: 8
Packaging group: III

IMDG: UN Number: UN1814
Proper shipping name: POTASSIUM HYDROXIDE SOLUTION
Class: 8
Packaging group: III

IATA: UN Number: UN1814
Proper shipping name: Potassium hydroxide solution
Class: 8
Packaging group: III

For transportation information regarding this product call the Kodak Worldwide Transportation Hazmat Hot Line: (585) 722-2400 between 8 a.m. and 5 p.m. (Eastern Standard Time), Monday through Friday. In Canada: General Shipping Information, call: (416) 766-8233.

15. Regulatory information

U.S. California Prop. 65: none

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

International Agency for Research on Cancer (IARC): Sodium sulphite: 3 (not classifiable as to carcinogenicity to humans)

American Conference of Governmental Industrial Hygienists (ACGIH): none

U.S. National Toxicology Program (NTP): none

U.S. Occupational Safety and Health Administration (OSHA): none

Chemical(s) subject to the reporting requirements of U.S. Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: none

16. Other information

US/Canadian Label Statements:

CONTAINS: Sodium sulphite (7757-83-7), Tripotassium phosphate (7778-53-2), Potassium hydroxide (1310-58-3)

WARNING!

CAUSES EYE BURNS

HARMFUL IF SWALLOWED

MIST IRRITATING TO THE EYES AND RESPIRATORY TRACT

Do not get in eyes.

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Avoid prolonged or repeated contact with skin.
Avoid breathing mist.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If swallowed, do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Notes to physician: Strong alkalis bind tissue protein. Following initial flushing of the eye with water, continued irrigation of the eye with saline is recommended. Treatment should be continued until pH of tears reaches neutral.

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.

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-2, S-3, F-0, C-0

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

Product name: KODAK PROFESSIONAL Color Developer Replenisher, Process E-6AR, Working Solution

Product code: 8402224

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

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

For Emergency Health, Safety & Environmental Information, call (585) 722-5151 (USA)

For other information or to request an MSDS, call (800) 242-2424.

Synonyms: None

2. Hazards identification

CONTAINS: 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate (25646-71-3), Tripotassium phosphate (7778-53-2), Potassium hydroxide (1310-58-3), Sodium sulphite (7757-83-7)

DANGER!
MAY BE HARMFUL IF SWALLOWED.
CAUSES SKIN AND EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION

HMIS Hazard Ratings:

Health - 2, Flammability - 0, Reactivity (Stability) - 0

NFPA Hazard Ratings:

Health - 1, Flammability - 0, Reactivity (Stability) - 0

NOTE: HMIS and NFPA 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. An asterisk (*), in the HMIS health field, designates potential chronic or target organ hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

Weight %	Components (CAS-No.)
90 - 95	Water (7732-18-5)
1 - 5	Tripotassium phosphate (7778-53-2)
1 - 5	4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate (25646-71-3)
< 1	Sodium sulphite (7757-83-7)
< 0.5	Potassium hydroxide (1310-58-3)

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4. First aid measures

Inhalation: If symptomatic, move to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Eyes: Immediately flush with plenty of water for at least 15 minutes. 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. Give victim a glass of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

5. Fire-fighting measures

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

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products: None (noncombustible)

Unusual Fire and Explosion Hazards: None

6. Accidental release measures

Methods for cleaning up: Flush into sewer with plenty of water. Otherwise, absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

7. Handling and storage

Personal precautions: Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapour. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: No special technical protective measures required.

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

8. Exposure controls / personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Sulphur dioxide	ACGIH	Time Weighted Average (TWA):	2 ppm
	ACGIH	Short Term Exposure Limit (STEL):	5 ppm
	OSHA Z1	PEL:	5 ppm 13 mg/m3
Potassium hydroxide	ACGIH	Ceiling Limit Value:	2 mg/m3
	4-(N-ethyl-N-2-EK HPG	Time Weighted Average (TWA):	1.0 mg/m3

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methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, evaporation from large surfaces, spraying, heating, etc.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: half-face cartridge respirator with high efficiency particulate aerosol (HEPA) cartridges.

Eye protection: Wear safety glasses with side shields (or goggles).

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

Recommended Decontamination Facilities: Safety shower, eye wash, washing facilities.

9. Physical and Chemical Properties

Physical form: liquid

Colour: colorless

Odour: odourless

Specific gravity: 1.04

Vapour pressure: 24 mbar (18.0 mm Hg)

Relative vapour density: 0.6

Volatile fraction by weight: < 95 %

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

Water solubility: completely soluble

pH: 12

Flash point: none, noncombustible liquid

10. Stability and reactivity

Stability: Stable

Incompatibility: acids.

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Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure

General advice : May cause kidney damage based on animal data.

Contains: 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate. May cause kidney damage based on animal data.

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: Causes irritation.

Skin: Causes irritation. May cause allergic skin reaction.

Ingestion: May be harmful if swallowed. 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 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate:

Acute Toxicity Data:

- Oral LD50 (male rat): 400 mg/kg (target organ effects: kidney)
- Oral LD50 (female rat): 246 mg/kg
- Dermal LD50: > 1,000 mg/kg (highest dose tested)
- Skin irritation: slight
- Skin irritation: moderate (repeated skin application)
- Skin Sensitization: moderate
- Skin Sensitization (human): positive
- Eye irritation (unwashed eyes): Moderate eye irritation
- Eye irritation (washed eyes): slight

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.

Carcinogenicity:

- Oral study (hamster, 2 years): NOEL; 0.04 % in diet (highest dose tested)
- Dermal study (mouse, 2 years): NOEL; 62 mg/kg (only dose tested)

12. Ecological information

Potential Toxicity:

Fish LC50: > 100 mg/l

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Daphnid EC50:	> 100 mg/l
Algal IC50:	> 100 mg/l
Waste treatment organisms EC50:	> 100 mg/l
Organics Readily Degradable:	No
Potential Bioaccumulation:	log Pow < 1
COD (approximate):	15 g/l
BOD (approximate):	2 g/l

13. Disposal considerations

Discharge, treatment, or disposal may be subject to national, state, or local laws.

14. Transport information

For transportation information regarding this product call the Kodak Worldwide Transportation Hazmat Hot Line: (585) 722-2400 between 8 a.m. and 5 p.m. (Eastern Standard Time), Monday through Friday. In Canada: General Shipping Information, call: (416) 766-8233.

15. Regulatory information

U.S. California Prop. 65: none

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

Chemical(s) subject to the reporting requirements of U.S. Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: none

16. Other information

US/Canadian Label Statements:

CONTAINS: 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine sesquisulphate monohydrate (25646-71-3), Tripotassium phosphate (7778-53-2), Potassium hydroxide (1310-58-3), Sodium sulphite (7757-83-7)

DANGER!

MAY BE HARMFUL IF SWALLOWED.

CAUSES SKIN AND EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

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Avoid breathing mist or vapour.
Avoid contact with eyes, skin, and clothing.
Use with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If swallowed, do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Keep out of reach of children.

For additional information, see Material Safety Data Sheet (MSDS) for this material.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

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R-1, S-2, F-0, C-0