

MATERIAL SAFETY DATA SHEET

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P/N's : 59184/59186

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

Product name: Kodak Polychrome GRAPHICS Subtractive 2-in-1 Plate Developer

Product code: 8774945

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 6460

Product Use: Film or paper manufacturing chemical

2. Hazards identification

CONTAINS: Benzyl alcohol (100-51-6), Sodium bisulphite (7631-90-5), Diphosphoric acid, tetrapotassium salt (7320-34-5)

WARNING!
CAUSES SKIN AND EYE IRRITATION
MAY BE HARMFUL IF SWALLOWED.

HMIS III Hazard Ratings: Health - 2, Flammability - 1, Physical Hazard - 0

NFPA Hazard Ratings: Health - 2, Flammability - 1, Instability - 0

NOTE: HMIS III and NFPA 704 (2001) 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 III 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.)
75 - 80	Water (7732-18-5)
5 - 10	Alkylated naphthalene sulfonate, sodium salt (not applicable)
5 - 10	Benzyl alcohol (100-51-6)
1 - 5	Diphosphoric acid, tetrapotassium salt (7320-34-5)
1 - 5	Poly(oxy-1,2-ethanediyl), .alpha.-hydro.-omega.-hydroxy-, ether with methyl D-glucopyranoside 2,6-di-(9Z)-9-octadecenoate (2:1) (86893-19-8)
0.1 - 1	Sodium bisulphite (7631-90-5)

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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: 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 center immediately. Never give anything by mouth to an unconscious person.

5. Fire-fighting measures

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.

Hazardous Combustion Products: Carbon oxides, sulphur oxides

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

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

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.

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
Benzyl alcohol	WEEL	time weighted average	10 ppm 44.2 mg/m ³
Sodium bisulphite	ACGIH	time weighted average	5 mg/m ³

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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. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: organic vapour. A respirator should be worn if hazardous decomposition products are likely to be or have been released. Respirator type: Acid gas. 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.

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 as appropriate to condition of use.

9. Physical and Chemical Properties

Physical form: liquid

Colour: yellow-orange

Odour: sweet

Specific gravity: 1.066

Vapour pressure: 24 mbar (18.0 mm Hg)

Vapour density: 0.6

Volatile fraction by weight: 75 - 80 %

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

Water solubility: complete

pH: 7.0

Flash point: does not flash

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: strong oxidizing agents.

Hazardous decomposition products: None under normal conditions of use.

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Hazardous Polymerization: Hazardous polymerization does not occur.

11. Toxicological information**Effects of Exposure**

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 eye irritation.

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

Ingestion: May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Data for Benzyl alcohol (CAS 100-51-6):**Acute Toxicity Data:**

- Oral LD50 (rat): 1,600 - 3,200 mg/kg
- Oral LD50 (rat): 1,230 mg/kg
- Inhalation LC50: 1.059 mg/l / 6 hr
- Dermal LD50: 1-5 mL/kg
- Skin irritation: strong
- Skin Sensitization: none
- Eye irritation (Information taken from reference works and the literature.): 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:

- Feeding study (13-day, rat): NOEL; 853 ml/kg/day (highest dose tested)

Data for Diphosphoric acid, tetrapotassium salt (CAS 7320-34-5):**Acute Toxicity Data:**

- Oral (rat): 1,346 mg/kg
- Oral (mouse): 1,132 mg/kg
- Skin irritation: moderate
- Skin Sensitization: weak

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.

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Repeated dose toxicity:

- Oral (13-day, rat): NOAEL; 875 mg/kg/day

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

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

12. Ecological information

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

Potential Toxicity:

Fish LC50:	No data available
Daphnid EC50:	No data available
Algal IC50:	No data available

Potential Bioaccumulation: log Pow < 1

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

U.S. California Prop. 65: none

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

International Agency for Research on Cancer (IARC): Sodium bisulphite: 3 (Classification not possible from current data.)

American Conference of Governmental Industrial Hygienists (ACGIH): Sodium bisulphite: Group A4 (Not classifiable as a human carcinogen.)

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

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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.

US/Canadian Label Statements:

CONTAINS: Benzyl alcohol (100-51-6), Sodium bisulphite (7631-90-5), Diphosphoric acid, tetrapotassium salt (7320-34-5)

WARNING!
CAUSES SKIN AND EYE IRRITATION
MAY BE HARMFUL IF SWALLOWED.

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

FIRST AID: If inhaled, move to fresh air. In case of contact, immediately flush eyes or 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. 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 center immediately.

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.

IN CASE OF FIRE: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

IN CASE OF SPILL: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

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-0