

MATERIAL SAFETY DATA SHEET

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

Product name: KODAK RP X-OMAT Developer Replenisher, Part C

Product code: 1249259 - Part C

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 5250, F5250

Product Use: Professional photographic processing solution

2. Hazards identification

CONTAINS: Glutaraldehyde (111-30-8), Acetic acid (64-19-7)

DANGER!

CAUSES SKIN AND EYE BURNS

HARMFUL IF SWALLOWED

DUST, MIST OR VAPOUR EXTREMELY IRRITATING TO THE EYES AND RESPIRATORY TRACT

MAY CAUSE ALLERGIC SKIN REACTION

POTENTIAL PEROXIDE FORMER

NFPA Hazard Ratings: Health - 3, Flammability - 1, Instability - 0

NOTE: NFPA 704 (2001) hazard indexes involves data review and interpretation that may vary among companies. It is intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

Weight %	Components (CAS-No.)
40 - 50	Water (7732-18-5)
40 - 45	Glutaraldehyde (111-30-8)
5 - 10	Acetic acid (64-19-7)
1 - 5	5-nitroindazole (5401-94-5)

4. First aid measures

Inhalation: If inhaled, move 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 immediately.

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Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. 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 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

Unusual Fire and Explosion Hazards: May form peroxides of unknown stability. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

6. Accidental release measures

Methods for cleaning up: Absorb spill with vermiculite or other inert material. Collect in a noncombustible container for prompt disposal. 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. Use only with adequate ventilation. Keep container closed. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

Prevention of Fire and Explosion: If peroxide formation is suspected, do not open or move container. Minimize exposure to air. Remove and wash contaminated clothing promptly.

Storage: Protect against light. 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
Acetic acid	ACGIH	time weighted average	10 ppm
	ACGIH	Short term exposure limit	15 ppm
	OSHA Z1	Permissible exposure limit	10 ppm 25 mg/m3
Glutaraldehyde	ACGIH	Ceiling Limit Value:	0.05 ppm

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

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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: full-face organic vapour cartridge. 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: If a full-face respirator is not worn, wear vapour-tight chemical goggle and a face shield.

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 green

Odour: aldehyde

Specific gravity: 1.127

Vapour pressure: 24 mbar (18.0 mm Hg)

Vapour density: 1.8

Volatile fraction by weight: > 95 %

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

Water solubility: complete

pH: 2.7

Flash point: does not flash

10. Stability and reactivity

Stability: Normally stable; however, on long term storage, materials containing similar functional groups form peroxides of unknown stability.

Incompatibility: Strong bases.

Hazardous decomposition products: None under normal conditions of use.

Hazardous Polymerization: Nonhazardous polymerization may occur. Avoid accelerators, Contamination, heat, incompatible materials, initiators, pressure.

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11. Toxicological information

Effects of Exposure

Inhalation: Vapor extremely irritating. Although it is known that glutaraldehyde is a respiratory tract irritant and may aggravate pre-existing asthmatic disorders, the supporting data for respiratory sensitization are less conclusive.

Eyes: Causes eye burns. Vapor extremely irritating.

Skin: Causes skin burns. May cause allergic skin reaction.

Ingestion: Harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed.

Data for Acetic acid (CAS 64-19-7):

Acute Toxicity Data:

- Oral LD50 (rat): 3,310 - 3,530 mg/kg
- Oral LD50: 4,960 mg/kg
- Inhalation LC50: 5620 ppm / 1.00 hr
- Dermal LD50: 1,060 mg/kg
- Skin irritation: severe
- Eye irritation: severe

Data for 5-nitroindazole (CAS 5401-94-5):

Acute Toxicity Data:

- Oral LD50 (rat): 3,200 mg/kg
- Dermal LD50: > 1,000 mg/kg
- Skin irritation: slight
- Skin irritation: slight (repeated skin application)
- Skin Sensitization: negative
- Eye irritation: 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.

Repeated dose toxicity:

- Oral (12-day, rat): NOAEL; 81 mg/kg/day

12. Ecological information

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

Potential Toxicity:

Fish LC50: 10 - 100 mg/l

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Daphnid EC50:	10 - 100 mg/l
Algal IC50:	1 - 10 mg/l
Waste treatment organisms EC50:	10 - 100 mg/l
Organics Readily Degradable:	Readily biodegradable
Potential Bioaccumulation:	log Pow < 1
COD (approximate):	535 g/l
BOD (approximate):	146 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

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.

IATA: UN Number: UN3265
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Glutaraldehyde, Acetic acid)
Class: 8
Packaging group: III

IMDG: UN Number: UN3265
Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde, Acetic acid)
Class: 8
Packaging group: III

US DOT: UN Number: UN3265
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Glutaraldehyde, Acetic acid)
Class: 8
Packaging group: III

For more transportation information, go to: www.kodak.com/go/ship.

15. Regulatory information

U.S. California Prop. 65: none

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

International Agency for Research on Cancer (IARC): none
American Conference of Governmental Industrial Hygienists (ACGIH): Glutaraldehyde: 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

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: Glutaraldehyde (111-30-8), Acetic acid (64-19-7)

DANGER!
CAUSES SKIN AND EYE BURNS
HARMFUL IF SWALLOWED
DUST, MIST OR VAPOUR EXTREMELY IRRITATING TO THE EYES AND RESPIRATORY TRACT
MAY CAUSE ALLERGIC SKIN REACTION
POTENTIAL PEROXIDE FORMER

Do not breathe vapours or spray mist.
Use only with adequate ventilation.
Keep container tightly closed.
Do not get in eyes, on skin, or on clothing.
Store away from heat and light.
Do not allow to evaporate to near dryness.
Avoid heat or contamination.
Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly.
Wash thoroughly after handling.

FIRST AID: If inhaled, move to fresh air. Get medical attention. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. If swallowed, DO NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

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.

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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. Collect in a noncombustible container for prompt disposal. 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-2, S-3, F-1, C-1ZTE