

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 B

Product code: 6490312 - Part B

Supplier: Carestream Health, Inc., 150 Verona Street, Rochester, New York 14608; Carestream Health Canada Company, 6 Monogram Place, Suite 200, Toronto, Ontario, M9R 0A1

For Emergency Health Information call, (800) 424-9300

For other information contact 800-328-2910.

Synonyms: PCD 5228

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

2. Hazards identification

CONTAINS: Acetic acid (64-19-7), 1-phenyl-3-pyrazolidinone (92-43-3)

DANGER!

POISON

MAY BE FATAL OR HARMFUL IF SWALLOWED

HARMFUL IF INHALED

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

CAUSES SEVERE SKIN AND EYE BURNS

MAY CAUSE ALLERGIC SKIN REACTION

BASED ON REPEATED-DOSE INGESTION STUDIES IN ANIMALS, A COMPONENT OF THIS

PRODUCT MAY CAUSE BLOOD, TESTICULAR, AND ADVERSE REPRODUCTIVE EFFECTS

COMBUSTIBLE LIQUID AND VAPOR

NFPA Hazard Ratings: Health - 3, Flammability - 2, Instability - 0

NOTE: NFPA 704 (2007) 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.)
75 - 80	Acetic acid (64-19-7)
10 - 15	1-phenyl-3-pyrazolidinone (92-43-3)

4. First aid measures

Inhalation: If inhaled, move to fresh air. Get medical attention.

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Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

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. Give victim a glass of water. 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. 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 (NO_x)

Unusual Fire and Explosion Hazards: Classified as combustible. Material contains a combustible solvent that may accumulate in the container headspace.

6. Accidental release measures

Methods for cleaning up: Remove all sources of ignition. 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: Do not breathe vapour at concentrations greater than the exposure limits. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation. Keep container tightly closed. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from heat and sources of ignition. Keep from contact with oxidizing materials. Use only with adequate ventilation.

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
Acetic acid	ACGIH	time weighted average	10 ppm
	ACGIH	Short term exposure limit	15 ppm
	OSHA Z1	time weighted average	10 ppm 25 mg/m ³

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1-phenyl-3-pyrazolidinone	OSHA Z1A EK HPG	time weighted average Time Weighted Average (TWA):	10 ppm 25 mg/m3 0.2 mg/m3
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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: 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: orange

Odour: pungent, acetic acid

Specific gravity: 1.081

Vapour pressure (at 20.0 °C (68.0 °F)) : 18 mbar (13.5 mm Hg)

Vapour density: 1.7

Volatile fraction by weight: > 85 %

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

Water solubility: complete

pH: < 1.0

Flash point: 56.1 °C (133.0 °F) (Setaflash closed cup)

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Strong oxidizing agents, Bases, Amines, Metals.

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Hazardous decomposition products: None under normal conditions of use.

Hazardous Polymerization: Hazardous polymerization does not occur.

11. Toxicological information

Effects of Exposure

General advice:

Contains: 1-phenyl-3-pyrazolidinone. Based on repeated-dose ingestion studies in animals, this chemical may cause blood, testicular, and adverse reproductive effects.

Contains: Acetic acid. Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthma-like reactive airways syndrome (RADS) in susceptible individuals. Extremely high airborne concentrations are not generated during normal conditions of use but may occur following a spill. The potential to generate extremely high airborne concentrations in a spill situation depends upon physical factors such as the concentration of the solution, the volume of the spill, the surface area of the spill, the size of the room where the spill occurred, and the ventilation rate in the room.

Inhalation: Harmful if inhaled. Airborne dust/mist/vapor extremely irritating.

Eyes: Causes severe eye burns. Airborne dust/mist/vapor extremely irritating.

Skin: Causes severe skin burns. May cause allergic skin reaction based on human experience.

Ingestion: May be fatal or 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 1-phenyl-3-pyrazolidinone (CAS 92-43-3):

Acute Toxicity Data:

- Oral LD50 (male rat): 476 mg/kg
- Oral LD50 (female rat): 336 mg/kg
- Dermal LD50 (guinea pig): > 1,000 mg/kg
- Skin irritation: slight
- Skin irritation: slight (repeated skin application)
- Skin Sensitization (guinea pig): negative
- Eye irritation (unwashed eyes): slight

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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 (90 days, rat): LOEL (Lowest observable effect level); 0.32 % in diet (target organ effects: testes)
- Oral (90 days, rat): LOEL (Lowest observable effect level); 0.08 % in diet (reduced feed intake)
- Oral (90 days, rat): LOEL (Lowest observable effect level); 0.02 % in diet (target organ effects: red blood cell)
- Feeding study (90 days, male and female rat): NOEL; (Not established, target organ effects: red blood cell, target organ effects: testes)
- Feeding study (90 days, male and female rat): LOEL (Lowest observable effect level); (Not established, target organ effects: red blood cell, target organ effects: testes)

12. Ecological information

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

Potential Toxicity:

Toxicity to fish:	10 - 100 mg/l
Toxicity to daphnia:	10 - 100 mg/l
Toxicity to algae:	10 - 100 mg/l
Toxicity to other organisms:	> 100 mg/l

Persistence and degradability: Readily biodegradable

Chemical Oxygen Demand (COD): 1163 g/l

Biochemical Oxygen Demand (BOD): 644 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.

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IATA: UN Number: UN2920
Proper shipping name: Corrosive liquid, flammable, n.o.s. (Acetic acid)
Class: 8
Sub-risks: 3
Packaging group: II

IMDG: UN Number: UN2920
Proper shipping name: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Acetic acid)
Class: 8
Sub-risks: 3
Packaging group: II

US DOT: UN Number: UN2920
Proper shipping name: Corrosive liquids, flammable, n.o.s. (Acetic acid)
Class: 8
Sub-risks: 3
Packaging group: II

For more transportation information, go to: www.carestreamhealth.com/go/ship2.

15. Regulatory information

Notification status

Regulatory List	Notification status	Other information	Not listed
EINECS	y (positive listing)	-	
TSCA	y (positive listing)	On TSCA Inventory	
AICS	y (positive listing)	-	
DSL	y (positive listing)	All components of this product are on the Canadian DSL list.	
ENCS (JP)	y (positive listing)	-	
KECI (KR)	y (positive listing)	-	
PICCS (PH)	y (positive listing)	-	
INV (CN)	y (positive listing)	-	

A N (Negative listing) indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Carestream Health.

Other regulations

American Conference of Governmental Industrial Hygienists (ACGIH):	No component of this product present at levels greater than or equal to 0. by ACGIH.
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0. carcinogen by IARC.

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U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0. NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0. by OSHA.
U.S. California Prop. 65:	none
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:	SARA 313: This material does not contain any chemical components with know reporting levels established by SARA Title III, Section 313.
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR355, Appendix A):	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323):	Acetic acid, Water, 1-phenyl-3-pyrazolidinone
US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000):	Acetic acid
US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5):	Acetic acid, 1-phenyl-3-pyrazolidinone, Water

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: Acetic acid (64-19-7), 1-phenyl-3-pyrazolidinone (92-43-3)

DANGER!

POISON

MAY BE FATAL OR HARMFUL IF SWALLOWED

HARMFUL IF INHALED

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

CAUSES SEVERE SKIN AND EYE BURNS

MAY CAUSE ALLERGIC SKIN REACTION

BASED ON REPEATED-DOSE INGESTION STUDIES IN ANIMALS, A COMPONENT OF THIS PRODUCT MAY CAUSE BLOOD, TESTICULAR, AND ADVERSE REPRODUCTIVE EFFECTS
COMBUSTIBLE LIQUID AND VAPOR

Keep away from heat and sources of ignition.

Do not breathe the mist or vapour at concentrations greater than the exposure limits.

Do not get in eyes, on skin, or on clothing.

Use only with adequate ventilation.

Keep container tightly closed.

Wash thoroughly after handling.

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FIRST AID: If inhaled, move to fresh air. Get medical attention. 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 immediately. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. 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. 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.

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. Use water spray to cool unopened containers.

IN CASE OF SPILL: Remove all sources of ignition. 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-2, S-3, F-2, C-0 REPO