

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Identification of the substance or mixture

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

Product code: 6610125C
Pure substance/mixture Mixture

Use of the Substance/Mixture

Product Use: Photographic chemical.

Company/Undertaking Identification

Manufacturer: Kodak (Wuxi) Company Ltd,
No. 18, Changjiang Road,
Wuxi, JiangSu Province,
China 214028

For further information, please contact:

For environment, health and safety information, email: WW-EHS@carestreamhealth.com

Emergency telephone

For Chemical Emergency Information, call: 0510-85252120

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute oral toxicity	Category 4
Acute inhalation toxicity - dust/mist	Category 4
Skin corrosion/irritation	Category 1 B
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ systemic toxicity (single exposure)	Category 3
Acute aquatic toxicity	Category 2

GHS Label elements, including precautionary statements



DANGER

Hazard statements

H302 - Harmful if swallowed
H332 - Harmful if inhaled
H314 - Causes severe skin burns and eye damage
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317 - May cause an allergic skin reaction
H335 - May cause respiratory irritation
H401 - Toxic to aquatic life

Precautionary Statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P272 - Contaminated work clothing should not be allowed out of the workplace
P273 - Avoid release to the environment
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P285 - In case of inadequate ventilation wear respiratory protection
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P363 - Wash contaminated clothing before reuse
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P310 - Immediately call a POISON CENTER or doctor/ physician
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P391 - Collect spillage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards which do not result in classification

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %
Water	70 - 75
Glutaraldehyde	10 - 15
Sodium bromide	10 - 15

4. FIRST AID MEASURES

Description of necessary first-aid measures

General advice	Show this material safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. Call a physician immediately.
Skin contact	Rinse immediately with plenty of water and seek medical advice.
Inhalation	Move to fresh air. If not breathing, give artificial respiration. Administer oxygen if breathing is difficult and you are trained. Seek immediate medical attention/advice.

Ingestion Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately. Rinse mouth.

Protection of First-aiders Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms/effects, acute and delayed

Skin contact Contact causes severe skin irritation and possible burns.

Eye contact Risk of serious damage to eyes.

Inhalation May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Ingestion Harmful if swallowed.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician May cause sensitization of susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Extinguishing media which shall not be used for safety reasons None.

Specific hazards arising from the chemical

Special Hazard Thermal decomposition can lead to release of irritating gases and vapors.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective suit.

Other information

Other information Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Advice for emergency responders
For personal protection see section 8

Environmental precautions

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.
Take up mechanically and collect in suitable container for disposal. Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

Other information

Refer to protective measures listed in Sections 7 and 8.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Wear personal protective equipment. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

Materials to Avoid Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Chemical Name	Taiwan	China	ACGIH TLV	European Union
Glutaraldehyde	Ceiling 0.2 ppm Ceiling 0.82 mg/m ³		Ceiling: 0.05 ppm	

Appropriate engineering controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment (PPE)

Personal Protective Equipment

General Information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Eye Protection	Tightly fitting safety goggles
Skin and body protection	Boots. Chemical resistant apron.
Hand Protection	Impervious gloves

Hygiene measures Remove and wash contaminated clothing before re-use. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid

ph 3.6

Flash point: Does not flash

Boiling point/boiling range > 100 °C / > 212 °F

Odor No information available

Color colorless

Autoignition temperature: No information available

Vapor Pressure 24 hPa

Vapor density 0.6

Density No information available

Water Solubility completely soluble

Melting point/range: No information available

Specific Gravity 1.13

Bulk Density: No information available

10. STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

None known.

Materials to Avoid

Strong bases.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Product Information.

Skin contact	Contact causes severe skin irritation and possible burns.
Eye contact	Risk of serious damage to eyes.
Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Ingestion	Harmful if swallowed.
Acute toxicity	0% of the mixture consists of ingredient(s) of unknown toxicity
Oral	1,318.00 mg/kg
Dermal	7,805.00 mg/kg
Inhalation	
Gas	No information available
Mist	3.51 mg/L
Vapor	No information available

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90,000 mg/kg (Rat)		
Glutaraldehyde	200 mg/kg (Rat) (50% glutaraldehyde in water)	1749 mg/kg (Rat) (50% glutaraldehyde in water)	0.51 mg/L (4hr Rat)
Sodium bromide	3400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	
Chemical Name	Other applicable information		
Sodium bromide	Ingestion of bromide salts can cause nausea, vomiting, headache, irritability, delirium, memory loss, decreased appetite, joint pain, hallucinations, stupor, coma, and acne like rash on face, legs, and trunk.		

Aggravated Medical Conditions Allergies, Skin disorders, Respiratory disorders, Preexisting eye disorders.

Subchronic toxicity

no data available

Chronic toxicity

Chronic toxicity

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen Avoid repeated exposure Possible risks of irreversible effects

Sensitization

May cause sensitization of susceptible persons.

Neurological effects

No information available.

Target Organ Effects

Respiratory system.

CMR Effects

Carcinogenicity

Contains no ingredient listed as a carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic organisms

Acute aquatic toxicity Product Information

No information available

Acute aquatic toxicity Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Glutaraldehyde	0.61 mg/L EC50 72 h (Desmodesmus subspicatus) 0.84 mg/L EC50 96 h (Desmodesmus subspicatus)	LC50 7.8 - 22 mg/L Lepomis macrochirus 96 h LC50 2.6 - 4.8 mg/L Oncorhynchus mykiss 96 h LC50 7.8 - 13 mg/L Oncorhynchus mykiss 96 h LC50= 5.4 mg/L Pimephales promelas 96 h	EC50 = 14 mg/L 48 h (Daphnia magna) EC50 0.56 - 1.0 mg/L 48 h (Daphnia magna)
Sodium bromide	5800 - 24000 mg/L EC50 96 h (Scenedesmus pannonicus)	LC50 24000 - 96000 mg/L Oryzias latipes 96 h LC50= 24000 mg/L Oryzias latipes 96 h LC50 15614 - 17428 mg/L Pimephales promelas 96 h LC50> 1000 mg/L Oncorhynchus mykiss 96 h LC50= 16000 mg/L Poecilia reticulata 96 h LC50 16000 - 24000 mg/L Poecilia reticulata 96 h LC50> 1000 mg/L Lepomis macrochirus 96 h LC50 0.054 - 0.081 mg/L Oncorhynchus mykiss 96 h	EC50 5800 - 48000 mg/L 48 h (Daphnia magna) EC50 5700 - 10800 mg/L 48 h (Daphnia magna)

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Chemical Name	log Pow
Glutaraldehyde	0.22

Mobility in soil

No information available

13. DISPOSAL CONSIDERATIONS

Waste from Residues / Unused Products Dispose of in accordance with local regulations.

Contaminated packaging Do not re-use empty containers. Dispose of in accordance with local regulations.

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.

ADR/RID

UN/ID No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde
Hazard class	8
Packing Group	II
Classification Code	C3
ADR/RID-Labels	8
Special Provisions	274
ADR Hazard Id (Kemmler Number)	80
Limited Quantity	LQ22

IMDG/IMO

UN/ID No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde
Hazard class	8
Packing Group	II
Marine Pollutant	NP
EmS No.	F-A, S-B
Special Provisions	274
Limited quantity DFDA	1 L

ICAO/IATA

UN/ID No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde
Hazard class	8
Packing Group	II
ERG Code	8L
Special Provisions	A3
Limited quantity DFDA	0.5 L

ADN

UN/ID No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde
Hazard class	8
Packing Group	II
Classification Code	C3
Special Provisions	274
Limited quantity DFDA	LQ22

TDG

UN/ID No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde

Hazard class	8
Packing Group	II

For transportation information, go to: <http://ship.carestreamhealth.com>.

15. REGULATORY INFORMATION

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
DSL/NDSL	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

16. OTHER INFORMATION

Revision Date	2013-10-25
Revision Note	(M)SDS sections updated

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Material Safety Data Sheet