Carestream

MATERIAL SAFETY DATA SHEET

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

Identification of the substance or mixture

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

Product code: 6610190B
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 dermal toxicity	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 2
Specific target organ systemic toxicity (single exposure)	Category 3
Specific target organ systemic toxicity (repeated exposure)	Category 1
Chronic aquatic toxicity	Category 3
Corrosive to Metals	Category 1

GHS Label elements, including precautionary statements

DANGER

Hazard statements
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H361 - Suspected of damaging fertility or the unborn child
H335 - May cause respiratory irritation
H412 - Harmful to aquatic life with long lasting effects
H290 - May be corrosive to metals

Precautionary Statements
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P234 - Keep only in original container
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
P273 - Avoid release to the environment
P280 - Wear protective gloves/ protective clothing/ eye protection/ face 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
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/ physician
P362 - Take off contaminated clothing and wash before reuse
P363 - Wash contaminated clothing before reuse
P390 - Absorb spillage to prevent material damage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
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 %
Acetic acid	60-70
3-Pyrazolidinone, 1-phenyl-	10-15

4. FIRST AID MEASURES

Description of necessary first-aid measures

General advice — Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance.

Eye contact — Immediate medical attention is required. Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. If easy to do, remove contact lens, if worn.

Skin contact — Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation — Immediate medical attention is required. Move to fresh air. Artificial respiration and/or oxygen may be necessary.

Ingestion	Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms/effects, acute and delayed

Skin contact	Causes burns.
Eye contact	Causes burns. Corrosive to the eyes and may cause severe damage including blindness.
Inhalation	May be harmful if inhaled. Irritating to mucous membranes. Irritating to respiratory system.
Ingestion	May be harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts.

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

Notes to physician	Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point: See chapter 9. PHYSICAL AND CHEMICAL PROPERTIES

Suitable Extinguishing Media

Suitable Extinguishing Media	The product is not flammable. 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	The product causes burns of eyes, skin and mucous membranes. 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

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Do not touch or walk through spilled material. Ensure adequate ventilation. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing.

Environmental precautions

Do not flush into surface water or sanitary sewer system. Try to prevent the material from entering drains or water courses. Do not allow material to contaminate ground water system.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.
Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.

Other information

Refer to protective measures listed in Sections 7 and 8.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling — Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. When using, do not eat, drink or smoke. Wash thoroughly after handling. Keep container tightly closed.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions — Keep containers tightly closed in a dry, cool and well-ventilated place. Keep at temperatures between 5°C and 30°C.

Materials to Avoid — Strong oxidizing agents. Bases. Amines. Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Chemical Name	Taiwan	China	ACGIH TLV	European Union
Acetic acid	TWA 15 ppm TWA 37.5 mg/m³	TWA 10 mg/m³ STEL 20 mg/m³	STEL 15 ppm TWA: 10 ppm	TWA 10 ppm TWA 25 mg/m³

Advisory OEL — 1-phenyl-3-pyrazolidone (CAS 92-43-3): TWA 0.2 mg/m³

Appropriate engineering controls

Engineering Measures — Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Ensure that eyewash stations and safety showers are close to the workstation location.

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	In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Eye Protection	Tightly fitting safety goggles: Face-shield.
Skin and body protection	Impervious clothing. Boots. Chemical resistant apron.
Hand Protection	Impervious gloves

Hygiene measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid
ph 0.6
Flash point: > 93.700 °C
Boiling point/boiling range No information available

Odor Pungent
Color orange
Autoignition temperature: No information available

Vapor Pressure No information available
Vapor density No information available
Density 1.083 g/cm3
Water Solubility completely soluble
Melting point/range: No information available
Specific Gravity No information available
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

Exposure to air or moisture over prolonged periods. Heat, flames and sparks.

Materials to Avoid

Strong oxidizing agents. Bases. Amines. Metals.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Acute toxicity Product Information.

Skin contact Causes burns.
Eye contact Causes burns. Corrosive to the eyes and may cause severe damage including blindness.
Inhalation May be harmful if inhaled. Irritating to mucous membranes. Irritating to respiratory system.
Ingestion May be harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts.

Acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity
Oral 1,157.81 mg/kg
Dermal 1,397.32 mg/kg
Inhalation
Gas No information available
Mist No information available
Vapor 6,118.74 mg/L

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h
3-Pyrazolidinone, 1-phenyl-	200 mg/kg (Rat)		

Chemical Name	Other applicable information
Acetic acid	Severe eye irritation Severe skin irritation 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 occured, and the ventilation rate in the room.

3-Pyrazolidinone, 1-phenyl-	Mild skin irritation Mild skin irritation Repeated exposure Mild eye irritation Did not cause sensitization on laboratory animals guinea pig Based on repeated-dose ingestion studies in animals, this chemical may cause blood, testicular, and adverse reproductive effects.

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

Subchronic toxicity

no data available

Chronic toxicity

Chronic toxicity Avoid repeated exposure. Possible risks of irreversible effects. 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. Contains a known or suspected reproductive toxin.

Sensitization May cause sensitization of susceptible persons.

Neurological effects No information available.

Target Organ Effects Respiratory system, Eyes, Skin, Teeth, Blood, Testes.

CMR Effects

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive toxicity Contains ingredients that are suspected reproductive hazards.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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
Acetic acid		LC50= 79 mg/L Pimephales promelas 96 h LC50= 75 mg/L Lepomis macrochirus 96 h	EC50 = 47 mg/L 24 h (Daphnia magna) EC50 = 65 mg/L 48 h (Daphnia magna)

Persistence and degradability

Degradation						
Type:	Method	Compartment	Sampling time	Units	Result	Units

Chemical Oxygen Demand (COD)					~ 1162	g/l
Biochemical Oxygen Demand (BOD)					~ 644	g/l

Bioaccumulative potential

No information available

Chemical Name	log Pow
Acetic acid	-0.31

13. DISPOSAL CONSIDERATIONS

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

Contaminated packaging Do not re-use empty containers. Empty containers may contain flammable or explosive vapours. Do not burn, or use a cutting torch on, the empty drum. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 UN2790
Proper Shipping Name Acetic acid solution
Hazard class 8
Packing Group II
Classification Code C3
ADR/RID-Labels 8
ADR Hazard Id (Kemmler Number) 80
Limited Quantity LQ22

IMDG/IMO

UN/ID No UN2790
Proper Shipping Name Acetic acid, solution
Hazard class 8
Packing Group II
Marine Pollutant NP
EmS No. F-A, S-B
Limited quantity DFDA 1 L

ICAO/IATA

UN/ID No UN2790
Proper Shipping Name Acetic acid solution
Hazard class 8
Packing Group II
ERG Code 8L
Limited quantity DFDA 0.5 L

ADN

UN/ID No UN2790

Proper Shipping Name	Acetic acid solution
Hazard class	8
Packing Group	II
Classification Code	C3
Limited quantity DFDA	LQ22

DOT

UN/ID No	UN2790
Proper Shipping Name	Acetic acid solution
Hazard class	8
Packing Group	II
Special Provisions	A3, A6, A7, A10, B2, IB2, T7, TP2

TDG

UN/ID No	UN2790
Proper Shipping Name	Acetic acid solution
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	Complies
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

National regulatory information

China

16. OTHER INFORMATION

Revision Date	2013-01-21
Revision Note	

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