Carestream

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 LO Fixer and Replenisher, Part A

Product code: 6610018A
Pure substance/mixture Mixture

Use of the Substance/Mixture

Product Use: Photographic chemical.
Restrictions on use Restricted to professional users

Company/Undertaking Identification

Supplier

Carestream Health Malaysia Sdn Bhd,
Unit No A-17-5, Jaya One,
No 72A. Jalan Universiti,
46200 Petaling Jaya, Selangor, Malaysia

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

CHEMTREC Malaysia: 1-800-815-308

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute toxicity - Oral	Category 5
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

GHS Label elements, including precautionary statements

Warning

hazard statements
H303 - May be harmful if swallowed
H319 - Causes serious eye irritation
H315 - Causes skin irritation

Precautionary Statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P362 - Take off contaminated clothing and wash before reuse
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention

Other hazards which do not result in classification

May be harmful if swallowed

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %
Water	45 - 50
Ammonium thiosulfate	40-45
Sodium bisulfite	1-5
Sodium acetate	1 - 5
Ammonium sulfite	1 - 5
Acetic acid	1 - 5
Sodium thiosulfate	1 - 5

4. FIRST AID MEASURES

Description of necessary first-aid measures

General advice IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Main Symptoms Irritation.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists, call a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion If swallowed, do not induce vomiting - seek medical advice.

Most important symptoms/effects, acute and delayed

Skin contact May cause irritation.

Eye contact Causes eye irritation.

Inhalation May cause irritation of respiratory tract. Contact with strong acids liberates sulfur dioxide. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

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

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

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

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 Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Special Hazard Thermal decomposition can lead to release of irritating gases and vapors. Dried product residue can act as a reducing agent. Reacts violently with oxidizing materials. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

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

Do not touch or walk through spilled material. For personal protection see section 8.

Advice for emergency responders
For personal protection see section 8

Environmental precautions

Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. Try to prevent the material from entering drains or water courses.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Other information

See also section 7.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling — When using, do not eat, drink or smoke. For personal protection see section 8. Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups. Drying of this product on clothing or combustible materials may cause fire.

Prevention of fire and explosion — Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups Drying of this product on clothing or combustible materials may cause fire.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions — Keep tightly closed in a dry and cool place. Keep at temperatures between 5°C and 30°C. Store in original container.

Materials to Avoid — Acids. Strong bases. Oxidizing agents. Sodium hypochlorite. Halogenated compounds.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Chemical Name	Taiwan	China	ACGIH TLV	European Union
Sodium bisulfite	STEL 10 mg/m³		TWA: 5 mg/m³	
Acetic acid	STEL 15 ppm STEL 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

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. 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	None under normal use conditions. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
Eye Protection	If splashes are likely to occur, wear: Goggles, Safety glasses with side-shields.
Skin and body protection	Wear impervious gloves and/or clothing if needed to prevent contact with the material.
Hand Protection	Use impervious, chemical resistant gloves.

Hygiene measures When using, do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid
ph 4.8
Flash point: Does not flash
Boiling point/boiling range > 100 °C / 212 °F

Odor Vinegar-like
Color light yellow
Autoignition temperature: No information available

Vapor Pressure 24 hPa @ 20 °C
Vapor density 0.6
Density No information available
Water Solubility completely soluble
Melting point/range: No information available
Specific Gravity
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

Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong acids liberates sulfur dioxide. Contact with bases liberates flammable material and ammonia.

Conditions to Avoid

Temperatures above 180°C.

Materials to Avoid

Acids. Strong bases. Oxidizing agents. Sodium hypochlorite. Halogenated compounds.

Hazardous Decomposition Products

Ammonia. Sulfur oxides. Nitrogen oxides (NOx). Chloramine.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Product Information.

Skin contact May cause irritation.
Eye contact Causes eye irritation.
Inhalation May cause irritation of respiratory tract. Contact with strong acids liberates sulfur dioxide. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.
Ingestion May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Unknown acute toxicity 0.99% of the mixture consists of ingredient(s) of unknown toxicity
Oral 3,829.00 mg/kg (ATE)
Dermal 41,074.00 mg/kg (ATE)
Inhalation
Gas No information available
Mist 163.00 mg/L (ATE)
Vapor No information available

Acute toxicity - Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water	90,000 mg/kg (Rat)		
Ammonium thiosulfate	> 2000 mg/kg (Rat)		
Sodium bisulfite	1420 mg/kg (Rat)		
Sodium acetate	3530 mg/kg (Rat)	10 g/kg (Rabbit) Dermal LD50 Rabbit >10 g/kg (Source: IUCLID)	30 g/m³ (Rat) 1 h Inhalation LC50 Rat >30 g/m³ 1 h (Source: IUCLID)
Ammonium sulfite	2500 mg/kg (Rat)		
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h Inhalation LC50 Rat 11.4 mg/L 4 h (Source: NLM_CIP)
Sodium thiosulfate	5000 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.
Sodium thiosulfate	Mild skin irritation

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

Subchronic toxicity
no data available

Chronic toxicity
Chronic toxicity Prolonged exposure may cause chronic effects.

Sensitization No information available.
Neurological effects No information available.
Target Organ Effects Respiratory system, Eyes, Skin, Teeth.

CMR Effects

Carcinogenicity Contains no ingredient listed as a carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

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
Sodium bisulfite			119: 48 h Daphnia magna mg/L EC50
Sodium acetate			1000: 48 h Daphnia magna mg/L EC50
Acetic acid		75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static	65: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability
Readily biodegradable.

Degradation						
Type:	Method	Compartment	Sampling time	Units	Result	Units
Chemical Oxygen Demand (COD)					306	g/l
Biochemical Oxygen Demand (BOD)					249	g/l

Bioaccumulative potential
No information available

Chemical Name	log Pow
Acetic acid	-0.31

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	Not regulated
IMDG/IMO	Not regulated
ICAO/IATA	Not regulated
ADN	Not regulated
TDG	Not regulated

For transportation information, go to: http://ship.carestream.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

Revision Date	2014-09-29
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 Safety Data Sheet