

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

#### Identification of the substance or mixture

**Product name:** KODAK X-OMAT ICM D-1 Developer Replenisher, Part C  
RP X-OMAT ICM D-1 Developer and Replenisher, Part C

**Product code:** 6610174C

**Pure substance/mixture** Mixture

#### Use of the Substance/Mixture

**Product Use:** Photographic chemical.

**Restrictions on use** Restricted to professional users

#### 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 5
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
Acute aquatic toxicity	Category 1
Corrosive to Metals	Category 1

#### GHS Label elements, including precautionary statements



## DANGER

### Hazard statements

H302 - Harmful if swallowed  
H332 - Harmful if inhaled  
H313 - May be harmful in contact with skin  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H400 - Very toxic to aquatic life  
H290 - May be corrosive to metals

### 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  
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  
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  
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
P390 - Absorb spillage to prevent material damage  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant

### Other hazards which do not result in classification

May form peroxides of unknown stability.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %
Water	40-50
Glutaraldehyde	40-50
Acetic acid	5-10
1H-Indazole, 5-nitro-	1-5

## 4. FIRST AID MEASURES

### Description of necessary first-aid measures

<b>General advice</b>	Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance.
<b>Main Symptoms</b>	Difficulty breathing. Coughing and/ or wheezing. Burning. Rashes. Causes serious eye irritation.
<b>Eye contact</b>	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.

<b>Skin contact</b>	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Inhalation</b>	Move to fresh air. Oxygen or artificial respiration if needed. Seek immediate medical attention/advice.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. Immediate medical attention is required.
<b>Protection of First-aiders</b>	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

#### Most important symptoms/effects, acute and delayed

<b>Skin contact</b>	Causes burns. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
<b>Eye contact</b>	Causes burns. Corrosive to the eyes and may cause severe damage including blindness.
<b>Inhalation</b>	May cause sensitization by inhalation. Irritating to mucous membranes. Irritating to respiratory system.
<b>Ingestion</b>	Harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts.

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

<b>Notes to physician</b>	May cause sensitization of susceptible persons. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically.
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### **5. FIRE-FIGHTING MEASURES**

#### Suitable Extinguishing Media

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Extinguishing media which shall not be used for safety reasons</b>	None.

#### Specific hazards arising from the chemical

<b>Special Hazard</b>	May form peroxides of unknown stability. Do not allow evaporation to dryness. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).
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#### Special protective actions for fire-fighters

<b>Special protective equipment for fire-fighters</b>	Wear self-contained breathing apparatus and protective suit.
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#### Other information

<b>Other information</b>	None known.
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### **6. ACCIDENTAL RELEASE MEASURES**

## Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. For personal protection see section 8. Ensure adequate ventilation. Do not touch or walk through spilled material.

### **Advice for emergency responders**

For personal protection see section 8

## 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. Prevent product from entering drains.

## Other information

Refer to protective measures listed in Sections 7 and 8.

## **7. HANDLING AND STORAGE**

### Precautions for safe handling

#### **Advice on safe handling**

Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Wear personal protective equipment. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

#### **Prevention of fire and explosion**

Keep from contact with oxidizing materials. If peroxide formation is suspected, do not open or move container. Minimize exposure to air. Do not distill or allow to evaporate to near dryness.

### Conditions for safe storage, including any incompatibilities

#### **Technical measures/Storage conditions**

Store in original container. Store in corrosive resistant container with a resistant inliner. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep at temperatures between 5°C and 30°C. Do not allow evaporation to dryness.

#### **Materials to Avoid**

Bases. Strong oxidizing agents. Metals.

## **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 <sup>3</sup>		Ceiling: 0.05 ppm	
Acetic acid	STEL 15 ppm STEL 37.5 mg/m <sup>3</sup>	TWA 10 mg/m <sup>3</sup> STEL 20 mg/m <sup>3</sup>	STEL 15 ppm TWA: 10 ppm	TWA 10 ppm TWA 25 mg/m <sup>3</sup>

## 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**

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 gloves. Impervious clothing. Chemical resistant apron. Boots.

#### **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** 2.3

**Flash point:** > 93.600 °C

**Boiling point/boiling range** > 100 °C

**Odor** Aldehydes

**Color** yellow - green

**Autoignition temperature:** No information available

**Vapor Pressure** 24 mbar @ 20 °C

**Vapor density** 1.8

**Density** 1.116 g/cm<sup>3</sup>

**Water Solubility** completely soluble

**Melting point/range:** No information available

**Specific Gravity** 1.116

**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. Reacts with air to form peroxides.

#### Possibility of hazardous reactions

May form explosive peroxides.

#### Conditions to Avoid

Exposure to air or moisture over prolonged periods. Do not allow evaporation to dryness.

#### Materials to Avoid

Bases. Strong oxidizing agents. Metals.

#### Hazardous Decomposition Products

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

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity Product Information.

<b>Skin contact</b>	Causes burns. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
<b>Eye contact</b>	Causes burns. Corrosive to the eyes and may cause severe damage including blindness.
<b>Inhalation</b>	May cause sensitization by inhalation. Irritating to mucous membranes. Irritating to respiratory system.
<b>Ingestion</b>	Harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts.
<b>Acute toxicity</b>	1.2% of the mixture consists of ingredient(s) of unknown toxicity
<b>Oral</b>	452.00 mg/kg
<b>Dermal</b>	2,953.00 mg/kg
<b>Inhalation</b>	
<b>Gas</b>	No information available
<b>Mist</b>	1.20 mg/L
<b>Vapor</b>	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)
Acetic acid	3310 mg/kg ( Rat )	1060 mg/kg ( Rabbit )	11.4 mg/L ( Rat ) 4 h
1H-Indazole, 5-nitro-	3200 mg/kg ( Rat )	> 1000 mg/kg (guinea pig)	
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 occurred, and the ventilation rate in the room.
1H-Indazole, 5-nitro-	Mild skin irritation Repeated exposure Did not cause sensitization on laboratory animals. Mild eye irritation

**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 by skin contact.

**Neurological effects**

No information available.

**Target Organ Effects**

Respiratory system, Eyes, Skin, Teeth, Mucous membrane, Gastrointestinal tract (GI).

**Other adverse 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.

CMR Effects

**Carcinogenicity** Contains no ingredient listed as a carcinogen.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity

Very 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)
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**

Readily biodegradable.

Degradation						
Type:	Method	Compartment	Sampling time	Units	Result	Units
Chemical Oxygen Demand (COD)					535	g/l
Biochemical Oxygen Demand (BOD)					146	g/l

### **Bioaccumulative potential**

No information available

Chemical Name	log Pow
Glutaraldehyde	0.22
Acetic acid	-0.31

### **Mobility in soil**

No information available

## 13. DISPOSAL CONSIDERATIONS

### **Waste from Residues / Unused Products**

Should not be released into the environment. Dispose of in accordance with local regulations.

### **Contaminated packaging**

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

<b>UN/ID No</b>	UN3265
<b>Proper Shipping Name</b>	Corrosive liquid, acidic, organic, n.o.s.
<b>Technical Name</b>	Glutaraldehyde, Acetic acid
<b>Hazard class</b>	8
<b>Packing Group</b>	III
<b>Classification Code</b>	C3
<b>ADR/RID-Labels</b>	8
<b>Special Provisions</b>	274
<b>ADR Hazard Id (Kemmler Number)</b>	80
<b>Hazchem Code</b>	2X
<b>Limited Quantity</b>	LQ7

### IMDG/IMO

<b>UN/ID No</b>	UN3265
<b>Proper Shipping Name</b>	Corrosive liquid, acidic, organic, n.o.s.
<b>Technical Name</b>	Glutaraldehyde, Acetic acid
<b>Hazard class</b>	8
<b>Packing Group</b>	III
<b>Marine Pollutant</b>	NP
<b>Marine pollutant</b>	Glutaraldehyde
<b>EmS No.</b>	F-A, S-B
<b>Special Provisions</b>	223, 274
<b>Limited quantity DFDA</b>	5 L

### ICAO/IATA

<b>UN/ID No</b>	UN3265
<b>Proper Shipping Name</b>	Corrosive liquid, acidic, organic, n.o.s.
<b>Technical Name</b>	Glutaraldehyde, Acetic acid
<b>Hazard class</b>	8
<b>Packing Group</b>	III
<b>ERG Code</b>	8L
<b>Special Provisions</b>	A3
<b>Limited quantity DFDA</b>	1 L

### ADN

<b>UN/ID No</b>	UN3265
<b>Proper Shipping Name</b>	Corrosive liquid, acidic, organic, n.o.s.
<b>Technical Name</b>	Glutaraldehyde, Acetic acid
<b>Hazard class</b>	8
<b>Packing Group</b>	III
<b>Classification Code</b>	C3
<b>Special Provisions</b>	274
<b>Limited quantity DFDA</b>	LQ7

### TDG

<b>UN/ID No</b>	UN3265
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<b>Proper Shipping Name</b>	Corrosive liquid, acidic, organic, n.o.s.
<b>Technical Name</b>	Glutaraldehyde, Acetic acid
<b>Hazard class</b>	8
<b>Packing Group</b>	III

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

## 15. REGULATORY INFORMATION

### International Inventories

<b>EINECS/ELINCS</b>	Complies
<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	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	2013-11-01
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**