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

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

Product code: 1249259B

Supplier Carestream Health, Inc., 150 Verona Street, Rochester, New York 14608

Emergency telephone number
CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

For other information contact: 800-328-2910

Product Use: Photographic chemical.

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview
Corrosive
The product causes burns of eyes, skin and mucous membranes
Harmful by inhalation, in contact with skin and if swallowed
Contains a known or suspected reproductive toxin

Potential Health Effects

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Causes burns. Corrosive to the eyes and may cause severe damage including blindness.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Causes burns.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May be harmful if inhaled. Irritating to mucous membranes. Irritating to respiratory system.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts. Can burn mouth, throat, and stomach.</td>
</tr>
</tbody>
</table>

Chronic Effects
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.

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

Environmental hazard
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. See Section 12 for additional Ecological Information.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>60-70</td>
</tr>
<tr>
<td>3-Pyrazolidinone, 1-phenyl-</td>
<td>92-43-3</td>
<td>10-15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-Hazardous Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>20 - 25</td>
</tr>
</tbody>
</table>

4. 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.

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

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

5. FIRE-FIGHTING MEASURES

**Flash point:**
> 93.4 °C

**Suitable Extinguishing Media**
The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**
Do not use a solid water stream as it may scatter and spread fire.

**Hazardous Combustion Products**
Hazardous decomposition products due to incomplete combustion: Carbon oxides, Hydrocarbons, Aldehydes.

**Specific hazards arising from the chemical**
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions
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.

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
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

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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>AIHA - Workplace Environmental Exposure Levels (WEELs) - TWA</th>
<th>OSHA PEL</th>
<th>Advisory OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>STEL: 15 ppm  TWA: 10 ppm</td>
<td>TWA: 10 ppm  TWA: 25 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Occupational Exposure 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.

Personal Protective Equipment

General Information
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/Face Protection
Tightly fitting safety goggles. Face-shield.

Skin and body protection
Impervious clothing. Boots. Chemical resistant apron.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: liquid

Ph: 0.6

Flash point: > 93.4 °C

Boiling point/boiling range: 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

Stability: Stable under normal conditions.


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

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

Hazardous Polymerization: Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity - Product Information

Skin: Causes burns.

Eyes: 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. Can burn mouth, throat, and stomach.

Acute toxicity - Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral (mg/kg)</th>
<th>LD50 Dermal (mg/kg)</th>
<th>LC50 Inhalation (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>3310</td>
<td>1060</td>
<td>11.4</td>
</tr>
<tr>
<td>Water</td>
<td>90,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-Pyrazolidinone, 1-phenyl-</td>
<td>200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Acetic acid

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Other applicable information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>Severe eye irritation</td>
</tr>
<tr>
<td></td>
<td>Severe skin irritation</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>

3-Pyrazolidinone, 1-phenyl-

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Other applicable information</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Pyrazolidinone, 1-phenyl-</td>
<td>Mild skin irritation</td>
</tr>
<tr>
<td></td>
<td>Mild skin irritation</td>
</tr>
<tr>
<td></td>
<td>Repeated exposure</td>
</tr>
<tr>
<td></td>
<td>Mild eye irritation</td>
</tr>
<tr>
<td></td>
<td>Did not cause sensitization on laboratory animals. guinea pig</td>
</tr>
<tr>
<td></td>
<td>Based on repeated-dose ingestion studies in animals, this chemical may cause blood, testicular, and adverse reproductive effects.</td>
</tr>
</tbody>
</table>

### Subchronic toxicity

No information available

### 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.

### Carcinogenicity

Contains no ingredient listed as a carcinogen.

### Sensitization

May cause sensitization of susceptible persons.

### Reproductive toxicity

Contains ingredients that are suspected reproductive hazards.

### Target Organ Effects

Respiratory system, Eyes, Skin, Teeth, Blood, Testes.

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

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

### Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>LC50= 79 mg/L Pimephales promelas 96 h LC50= 75 mg/L Lepomis macrochirus 96 h</td>
<td>EC50 = 47 mg/L 24 h (Daphnia magna) EC50 = 65 mg/L 48 h (Daphnia magna)</td>
<td></td>
</tr>
</tbody>
</table>

### Persistence and degradability
Bioaccumulation: - No information available

Mobility - No information available

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>-0.31</td>
</tr>
</tbody>
</table>

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods**
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.

**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
- **Emergency Response Guide Number**: 153

**TDG**
- **UN/ID No**: UN2790
- **Proper Shipping Name**: Acetic acid solution
- **Hazard class**: 8
- **Packing Group**: II

**ICAO/IATA**
- **UN/ID No**: UN2790
- **Proper Shipping Name**: Acetic acid solution
- **Hazard class**: 8
- **Packing Group**: II
- **ERG Code**: 8L

**IMDG/IMO**
- **UN/ID No**: UN2790
- **Proper Shipping Name**: Acetic acid, solution
- **Hazard class**: 8
- **Packing Group**: II
- **EmS No.**: F-A, S-B

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

### 15. REGULATORY INFORMATION
International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td></td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td></td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td></td>
</tr>
<tr>
<td>ENCS</td>
<td></td>
</tr>
<tr>
<td>IECSC</td>
<td></td>
</tr>
<tr>
<td>KECL</td>
<td></td>
</tr>
<tr>
<td>PICCS</td>
<td></td>
</tr>
<tr>
<td>AICS</td>
<td></td>
</tr>
<tr>
<td>NZIoC</td>
<td></td>
</tr>
</tbody>
</table>

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

U.S. Federal Regulations

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>HAPS data</th>
<th>VOC Chemicals</th>
<th>Class 1 Ozone Depleters</th>
<th>Class 2 Ozone Depleters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid - 64-19-7</td>
<td></td>
<td>Group II</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>SARA Product RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>5000 lb</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TSCA
This product does not contain any chemicals regulated under TSCA Section 4, Section 5(a), Section 8(a) or Section 8(d).

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

Mexico - Grade: Serious risk, Grade 3

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td></td>
<td>Mexico: TWA 10 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: TWA 25 mg/m$^3$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 15 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 37 mg/m$^3$</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Disclaimer for Label
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.

DANGER!
- Contains:

Hazardous Components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>60-70</td>
</tr>
<tr>
<td>3-Pyrazolidinone, 1-phenyl-</td>
<td>92-43-3</td>
<td>10-15</td>
</tr>
</tbody>
</table>

Corrosive. The product causes burns of eyes, skin and mucous membranes. Harmful by inhalation, in contact with skin and if swallowed. Contains a known or suspected reproductive toxin.

Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Wash thoroughly after handling.

Additional information is given in the Material Safety Data Sheet.

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.