

**MATERIAL SAFETY DATA SHEET.**

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**Version** 2

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

**Product name:** KODAK X-OMAT EX II Developer and Replenisher, Part B.

**Product code:** 1135433B

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

For Emergency Health Information call: 800-424-9300.

For other information contact: 800-328-2910.

**Synonyms** PCD 6547.

**Product Use:** Photographic chemical.

2. HAZARDS IDENTIFICATION

**Warning!.**

**Emergency Overview**

May be harmful if swallowed

**Physical state** liquid.

**Odor** Slight Vinegar-like.

**Color** clear, colorless.

**HMIS**

**Health Hazard** - 1

**Flammability** - 1

**Physical - 0  
Hazard**

**Potential Health Effects**

**Eyes**

May cause irritation.

**Skin**

May cause sensitization by skin contact. May cause irritation.

**Inhalation**

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.

**Chronic Effects**

**Chronic toxicity**

Effects expected to be similar to those seen acutely.

**Aggravated Medical Conditions**

Skin disorders. Preexisting eye disorders. Respiratory disorders. Asthma.

**Environmental hazard**

See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous

| Chemical Name  | CAS-No     | Weight % |
|--|------------|----------|
| 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt    | 7420-89-5  | 20-25    |
| 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, dipotassium salt | 68310-08-7 | 1-5      |
| Acetic acid  | 64-19-7    | 1-5      |
| Potassium sulfite  | 10117-38-1 | 0.1-1    |

Non-Hazardous

| Chemical Name     | CAS-No    | Weight % |
|-------------------|-----------|----------|
| Water             | 7732-18-5 | 70-80    |
| Potassium acetate | 127-08-2  | 1-5      |

#### 4. FIRST AID MEASURES

|                           |  |
|---------------------------|--|
| <b>General advice</b>     | IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.  |
| <b>Eye contact</b>        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.  |
| <b>Skin contact</b>       | Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Get medical attention immediately if symptoms occur.   |
| <b>Inhalation</b>         | Move to fresh air. Get medical attention immediately if symptoms occur.  |
| <b>Ingestion</b>          | If swallowed, call a poison control center or doctor immediately. Do not induce vomiting without medical advice. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting - seek medical advice. |
| <b>Notes to physician</b> | Treat symptomatically.   |

#### 5. FIRE-FIGHTING MEASURES

|                                       |  |
|---------------------------------------|--|
| <b>Flash point:</b>                   | Does not flash.  |
| <b>Suitable Extinguishing Media</b>   | Use CO2, dry chemical, or foam.                                    |
| <b>Unsuitable Extinguishing Media</b> | Do not use a solid water stream as it may scatter and spread fire. |
| <b>Hazardous Combustion Products</b>  | Carbon oxides, Sulfur oxides.                                      |

#### 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.

**NFPA**                      **Health Hazard** - 1                      **Flammability** - 1                      **Stability** - 0

#### 6. ACCIDENTAL RELEASE MEASURES

|                                |   |
|--------------------------------|---|
| <b>Personal precautions</b>    | For personal protection see section 8. Ensure adequate ventilation. |
| <b>Methods for Containment</b> | Prevent further leakage or spillage if safe to do so.               |

**Methods for cleaning up** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

**Other information** See Section 12 for additional information.

7. HANDLING AND STORAGE

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

**Technical measures/Storage conditions** Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

| Chemical Name          | ACGIH TLV                   | AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs | OSHA PEL                              | Advisory OEL |
|------------------------|-----------------------------|---|---------------------------------------|--------------|
| Acetic acid<br>64-19-7 | STEL: 15 ppm<br>TWA: 10 ppm |   | TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> |              |

**Occupational Exposure Controls**

**Engineering Measures** Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation.

**Personal Protective Equipment**

**General Information** These recommendations apply to the product as supplied.

**Respiratory protection** Use only with adequate ventilation. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

**Eye/Face Protection** Safety glasses with side-shields. If splashes are likely to occur, wear:: Goggles.

**Skin and body protection** Wear suitable protective clothing.

**Hand Protection** Impervious gloves.

**Other Protective Equipment** Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state** liquid.  
**ph** . 4.6  
**Flash point:** Does not flash.  
**Boiling point/boiling range** . >. 100 °C.  
**Vapor Pressure** . >24 mbar @ 20 °C.  
**Vapor density** . 0.6

**Odor** Slight Vinegar-like.  
**Color** clear, colorless.  
**Autoignition temperature:** No information available.

**Density** No information available.  
**Volatile organic compounds (VOC) content** 70 - 75  
**Water Solubility** . completely soluble.  
**Melting point/range:** No information available.  
**Specific Gravity** . 1.15  
**Bulk Density:** No information available.

## 10. STABILITY AND REACTIVITY

**Stability** Stable under normal conditions.

**Incompatible products** Acids. Strong oxidizing agents. Contact with strong acids liberates sulfur dioxide.

**Conditions to Avoid** Heat, flames and sparks.

**Hazardous Decomposition Products** Sulfur oxides.

**Hazardous Polymerization** Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

Acute toxicity Product Information.

**Skin** May cause sensitization by skin contact. May cause irritation.

**Eyes** May cause irritation.

**Inhalation** 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.

Acute toxicity Component Information.

| Chemical Name   | LD50 Oral          | LD50 Dermal               | LC50 Inhalation       |
|---|--------------------|---------------------------|-----------------------|
| Water   | 90 mL/kg ( Rat )   |                           |                       |
| 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt | > 3200 mg/kg (Rat) | > 1000 mg/kg (guinea pig) |                       |
| Acetic acid   | 3310 mg/kg ( Rat ) | 1060 mg/kg ( Rabbit )     | 11.4 mg/L ( Rat ) 4 h |
| Potassium acetate   | 3250 mg/kg ( Rat ) |                           |                       |

| Chemical Name | Other applicable information |
|---------------|------------------------------|
|---------------|------------------------------|

|   |   |
|---|---|
| 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt | Moderate eye irritation<br>-<br>Slight<br><br>Moderate skin irritation<br>-<br>Strong<br><br>Skin Sensitization<br>(<br>guinea pig<br>): negative<br><br>Was not a skin sensitizer in animal studies and has not been reported to cause allergic skin reaction in humans. In an alkaline solution, glutaraldehyde bis(sodium bisulfite) may release free glutaraldehyde, a known skin sensitizer  |
| Acetic acid   | Severe eye irritation<br><br>Severe skin irritation<br><br>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 |
| Potassium sulfite   | Mild skin irritation<br>-<br>Moderate skin irritation   |

**Subchronic toxicity** No information available.

**Chronic toxicity** Effects expected to be similar to those seen acutely.

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

**Sensitization** Repeated or prolonged contact may cause allergic reactions in very susceptible persons.

**Target Organ Effects** Eyes, Skin, Respiratory system.

12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Ecotoxicity effects** Contains a substance which is:: Harmful to aquatic organisms. However, at the concentration present, this preparation is not expected to present significant adverse environmental effects.

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) |
| Potassium acetate |                   | LC50= 6800 mg/L Oncorhynchus mykiss 96 h                                      | EC50 = 7170 mg/L 24 h (Daphnia magna)                                   |
| Potassium sulfite |                   | LC50 220 - 460 mg/L Leuciscus idus 96 h                                       |   |

**Persistence and degradability** Expected to be readily biodegradable.

**Bioaccumulation:** No information available.

**Mobility** No information available.

| Chemical Name | log Pow |
|---------------|---------|
| Acetic acid   | -0.31   |

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** Not regulated.

**TDG** Not regulated.

**ICAO/IATA** Not regulated.

**IMDG/IMO** Not regulated.

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

15. REGULATORY INFORMATION

"Does not comply" indicates a component is either not on the public inventory or is subject to exemption requirements. If additional information is needed contact Carestream Health.

**International Inventories**

**TSCA** Complies

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

**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             | No.  |
| 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).

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Acetic acid   | 5000 lb                     |                        |                           | X                          |

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

| Chemical Name         | HAPS data | VOC Chemicals | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|-----------------------|-----------|---------------|-------------------------|-------------------------|
| Acetic acid - 64-19-7 |           | Group II      |                         |                         |

**CERCLA**

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | SARA Product RQ |
|---------------|--------------------------|------------------------------------|-----------------|
| Acetic acid   | 5000 lb                  |                                    |                 |

**TSCA**

| Chemical Name | U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping |
|---------------|---|
| Water         | Partially exempt chemical substance termed Petroleum Process Stream                                       |

## U.S. State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

## U.S. State Right-to-Know Regulations

| Chemical Name | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---------------|---------------|------------|--------------|----------|--------------|
| Acetic acid   | X             | X          | X            |          | X            |

## International Regulations

**Mexico - Grade** Slight risk, Grade 1.

| Chemical Name | Carcinogen Status | Exposure Limits  |
|---------------|-------------------|--|
| Acetic acid   |                   | Mexico: TWA 10 ppm Mexico: TWA 25 mg/m <sup>3</sup><br>Mexico: STEL 15 ppm Mexico: STEL 37 mg/m <sup>3</sup> |

## 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.

### Warning!

Contains:

#### Hazardous Components

| Chemical Name  | CAS-No     | Weight % |
|--|------------|----------|
| 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt    | 7420-89-5  | 20-25    |
| 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, dipotassium salt | 68310-08-7 | 1-5      |
| Acetic acid  | 64-19-7    | 1-5      |
| Potassium sulfite  | 10117-38-1 | 0.1-1    |

May be harmful if swallowed.

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.