

**MATERIAL SAFETY DATA SHEET**

**Issuing date** 2013-07-31

**Revision Date** 2013-07-31

**Version** 5.01

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

**Product name:** X-OMAT MX Fixer and Replenisher, Part B  
KODAK Medical X-Ray Fixer and Replenisher, Part B

**Product code:** 1241355B

**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

**Synonyms** PCD 6411

**Product Use:** Restricted to professional users. Photographic chemical.

**2. HAZARDS IDENTIFICATION**

**Warning!**

**Emergency Overview**

Corrosive

The product causes burns of eyes, skin and mucous membranes

**Physical state** liquid

**Odor** Odorless

**Color** clear colorless

**HMIS**

**Health Hazard** - 2\*

**Flammability** - 1

**Physical - 0  
Hazard**

**Potential Health Effects**

**Eyes**

Irritating to eyes.

**Skin**

May cause irritation.

**Inhalation**

May cause irritation of respiratory tract.

**Ingestion**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Effects**

**Chronic toxicity**

Repeated inhalation of vapors may cause irritation of respiratory tract or bronchitis.

**Aggravated Medical Conditions**

Respiratory disorders.

**Environmental hazard**

See Section 12 for additional Ecological Information.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous

Chemical Name	CAS-No	Weight %
Aluminum sulfate	10043-01-3	10-15

Sulfuric acid	7664-93-9	1-5
Non-Hazardous		
<b>Chemical Name</b>	<b>CAS-No</b>	<b>Weight %</b>
Water	7732-18-5	>80

#### 4. FIRST AID MEASURES

<b>General advice</b>	Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash/Decontaminate removed clothing before reuse. Immediate medical attention is required.
<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediate medical attention is required.
<b>Ingestion</b>	Immediate medical attention is required. Rinse mouth. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
<b>Notes to physician</b>	Probable mucosal damage may contraindicate the use of gastric lavage.
<b>Protection of First-aiders</b>	Use personal protective equipment.

#### 5. FIRE-FIGHTING MEASURES

<b>Flash point:</b>	> 93.4 °C
<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>Hazardous Combustion Products</b>	Hazardous decomposition products due to incomplete combustion.
<b>Protective Equipment and Precautions for Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>NFPA</b>	<b>Health Hazard</b> - 3 <b>Flammability</b> - 1 <b>Stability</b> - 0

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Use personal protective equipment. Sweep up and shovel into suitable containers for disposal.

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

7. HANDLING AND STORAGE

**Advice on safe handling** Wear personal protective equipment. Avoid contact with skin, eyes and clothing.

**Technical measures/Storage conditions** Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

Chemical Name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m <sup>3</sup>		TWA: 1 mg/m <sup>3</sup>	

**Occupational Exposure Controls**

**Engineering Measures** Showers, eyewash stations, and ventilation systems.

**Personal Protective Equipment**

**General Information** 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. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use.

**Eye/Face Protection** Tightly fitting safety goggles. Chemical safety glasses with sideshields.

**Skin and body protection** Impervious clothing.

**Hand Protection** Impervious gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state** liquid

**ph** < 1

**Flash point:** > 93.4 °C

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

**Vapor Pressure** 24 mbar @ 20 °C

**Vapor density** 0.6

**Density** No information available

**Water Solubility** completely soluble

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

**Specific Gravity** 1.17

**Bulk Density:** No information available

**Odor** Odorless

**Color** clear colorless

**Autoignition temperature:** No information available

10. STABILITY AND REACTIVITY

**Stability** Stable under normal conditions.

**Incompatible products** Bases.

**Conditions to Avoid** None known.

**Hazardous Decomposition Products** Sulfur oxides.

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

**Hazardous Reactions** None under normal processing.

11. TOXICOLOGICAL INFORMATION
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Acute toxicity - Product Information

**Skin** May cause irritation.

**Eyes** Irritating to eyes.

**Inhalation** May cause irritation of respiratory tract.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90,000 mg/kg ( Rat )		
Aluminum sulfate	> 5000 mg/kg ( Rat )		
Sulfuric acid	2140 mg/kg ( Rat )		347 ppm ( Rat ) 1 h 510 mg/m <sup>3</sup> ( Rat ) 2 h
Chemical Name	Other applicable information		
Aluminum sulfate	Severe eye irritation No skin irritation Cell transformation assay: negative Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea		
Sulfuric acid	International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong inorganic mists or vapours containing sulfuric acid is carcinogenic to humans. Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthmalike reactive airways syndrome (RADS) in susceptible individuals. The following exposure effects are based on pH of the solution, concentration of the acid, and a review of the literature.		

**Subchronic toxicity** No information available

**Chronic toxicity** Repeated inhalation of vapors may cause irritation of respiratory tract or bronchitis.

**Carcinogenicity** Exposure to strong inorganic mists containing sulfuric acid may cause cancer by inhalation.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid	A2	1		X

**Target Organ Effects** Eyes, Respiratory system, Lungs, Gastrointestinal tract (GI).

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity effects** May be harmful to aquatic organisms.

#### Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Aluminum sulfate		LC50= 100 mg/L Carassius auratus 96 h LC50= 37 mg/L Gambusia affinis 96 h	EC50 = 136 mg/L 15 min (Daphnia magna)
Sulfuric acid		LC50> 500 mg/L Brachydanio rerio 96 h	EC50 = 29 mg/L 24 h (Daphnia magna)

**Persistence and degradability** No information available

**Bioaccumulation:** - No information available

**Mobility** - No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** 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.

### DOT

**UN/ID No** UN3264  
**Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s.  
**Technical Name** Sulphuric acid Aluminum sulfate  
**Hazard class** 8  
**Packing Group** III

### TDG

**UN/ID No** UN3264  
**Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s.  
**Technical Name** Sulfuric acid, Aluminum sulfate  
**Hazard class** 8  
**Packing Group** III

### ICAO/IATA

**UN/ID No** UN3264  
**Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s.  
**Technical Name** Sulfuric acid, Aluminum sulfate  
**Hazard class** 8

**Packing Group** III  
**ERG Code** 8L  
**Special Provisions** A3

**IMDG/IMO**

**UN/ID No** UN3264  
**Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s.  
**Technical Name** Sulfuric acid, Aluminum sulfate  
**Hazard class** 8  
**Packing Group** III  
**EmS No.** F-A, S-B  
**Special Provisions** 223, 274

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** 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

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	SARA 313 - Threshold Values %
Sulfuric acid - 7664-93-9	1.0

**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**

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Aluminum sulfate	5000 lb			X
Sulfuric acid	1000 lb			X

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

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

**CERCLA**

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Product RQ
Aluminum sulfate	5000 lb		
Sulfuric acid	1000 lb	1000 lb	

**TSCA**

**U.S. State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

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

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Aluminum sulfate	X	X	X		
Sulfuric acid	X	X	X	X	X

**International Regulations**

**Mexico - Grade** Serious risk, Grade 3

Chemical Name	Carcinogen Status	Exposure Limits
Aluminum sulfate		Mexico: TWA 2 mg/m <sup>3</sup>
Sulfuric acid	A2	Mexico: TWA 1 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 %
Aluminum sulfate	10043-01-3	10-15
Sulfuric acid	7664-93-9	1-5

Corrosive. The product causes burns of eyes, skin and mucous membranes.

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**

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