Carestream

MATERIAL SAFETY DATA SHEET

Issuing date 2013-07-31 **Revision Date** 2013-07-31 **Version** 3.01

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

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

Product code: 1241355A

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: Restricted to professional users. Photographic chemical.

2. HAZARDS IDENTIFICATION

CAUTION!

Emergency Overview

May cause skin irritation
May be harmful if swallowed

Physical state liquid **Odor** Acetic **Color** light yellow

HMIS **Health Hazard** - 1 **Flammability** - 1 **Physical Hazard** - 0

Potential Health Effects

Eyes	May cause irritation.
Skin	May cause irritation.
Inhalation	Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. Contact with strong acids liberates sulfur dioxide. May cause irritation of respiratory tract.
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	No known effect based on information supplied.
Aggravated Medical Conditions	None known.
Environmental hazard	See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous

Chemical Name	CAS-No	Weight %
Ammonium sulfite	10196-04-0	1 - 5
Acetic acid	64-19-7	1 - 5
Sodium bisulfite	7631-90-5	1 - 5

Non-Hazardous

Chemical Name	CAS-No	Weight %
Water	7732-18-5	45 - 50
Ammonium thiosulfate	7783-18-8	30 - 40
Sodium thiosulfate	7772-98-7	5 - 10
Sodium acetate	127-09-3	1 - 5
Citrate, sodium, dihydrate	6132-04-3	1 - 5

4. FIRST AID MEASURES

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

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation Move to fresh air. Get medical attention immediately if symptoms occur.

Ingestion Rinse mouth. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention immediately if symptoms occur.

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point: Does not flash

Suitable Extinguishing Media 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 Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides.

Specific hazards arising from the chemical
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).

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** - 3 **Flammability** - 1 **Stability** - 0

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Methods for Containment Dike far ahead of liquid spill for later disposal.

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 Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

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 64-19-7	STEL 15 ppm TWA: 10 ppm		TWA: 10 ppm TWA: 25 mg/m^3	
Sodium bisulfite 7631-90-5	TWA: 5 mg/m^3			

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 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 5.4
Flash point: Does not flash
Boiling point/boiling range > 100 °C / 212 °F

Vapor Pressure 24 mbar @ 20 °C @ 20 °C
Vapor density 0.6
Density No information available
Water Solubility completely soluble
Melting point/range: No information available
Specific Gravity 1.31

Odor Acetic
Color light yellow
Autoignition temperature: No information available

Bulk Density: No information available

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions.

Incompatible products Acids. Strong bases. Oxidizing agents. Halogenated compounds. Contact with strong acids liberates sulfur dioxide.

Conditions to Avoid Heat, flames and sparks. Do not allow evaporation to dryness.

Hazardous Decomposition Products Ammonia. Chloramine. Sulfur oxides. Nitrogen oxides (NOx).

Hazardous Polymerization Hazardous polymerization does not occur.

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity - Product Information

Skin May cause irritation.

Eyes May cause irritation.

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

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	90,000 mg/kg (Rat)		
Ammonium thiosulfate	> 2000 mg/kg (Rat)		
Sodium thiosulfate	5000 mg/kg (Rat)		
Ammonium sulfite	2500 mg/kg (Rat)		
Sodium acetate	3530 mg/kg (Rat)	10 g/kg (Rabbit)	30 g/m^3 (Rat) 1 h
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h
Sodium bisulfite	1420 mg/kg (Rat)		

Chemical Name	Other applicable information
Sodium thiosulfate	Mild skin irritation

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.

Subchronic toxicity No information available

Carcinogenicity Contains no ingredient listed as a carcinogen.

Sensitization May cause sensitization of susceptible persons.

Target Organ Effects Eyes, Skin, Respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Sodium thiosulfate		LC50= 24000 mg/L Gambusia affinis 96 h	
Sodium acetate			EC50 > 1000 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)
Sodium bisulfite		LC50= 240 mg/L Gambusia affinis 96 h	EC50 = 119 mg/L 48 h (Daphnia magna)

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 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	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	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Complies
IECSC	Complies
KECL	Does not comply
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 %
Ammonium thiosulfate - 7783-18-8	1.0
Ammonium sulfite - 10196-04-0	1.0

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
Ammonium sulfite	5000 lb			X
Acetic acid	5000 lb			X
Sodium bisulfite	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
Ammonium sulfite	5000 lb		
Acetic acid	5000 lb		
Sodium bisulfite	5000 lb		

TSCA

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping
Sodium bisulfite	PAIR: 01/26/1994
Chemical Name	**U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances**
Sodium bisulfite	01/26/1994

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
Ammonium thiosulfate	X		X		
Ammonium sulfite	X	X	X		
Acetic acid	X	X	X		X
Sodium bisulfite	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^3 Mexico: STEL 15 ppm Mexico: STEL 37 mg/m^3

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.

CAUTION!

- Contains:

Hazardous Components

Chemical Name	CAS-No	Weight %
Ammonium sulfite	10196-04-0	1 - 5
Acetic acid	64-19-7	1 - 5
Sodium bisulfite	7631-90-5	1 - 5

May cause skin irritation. May be harmful if swallowed.

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

Flush eyes with water for at least 15 minutes. Get medical attention if eye irritation develops or persists.
IF ON SKIN: Gently wash with plenty of soap and water. Get medical attention if irritation develops and persists.
Drink 1 or 2 glasses of water. Get immediate medical attention/advice.
Additional information is given in the Material Safety Data Sheet.