

SAFETY DATA SHEET

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Version 1

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

Product name: X-OMAT MX Developer and Replenisher, Part C

Product code: 8344061C

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

Classification

Acute Toxicity - Oral	Category 3
Acute Toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye Irritation	Category 1
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1

Label elements

Emergency Overview

Signal word	Danger
hazard statements	
Toxic if swallowed	
Harmful in contact with skin	
Harmful if inhaled	
Causes severe skin burns and eye damage	
May cause allergy or asthma symptoms or breathing difficulties if inhaled	
May cause an allergic skin reaction	

**Appearance** Colorless Liquid**Physical state** liquid**Odor** Vinegar-like**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statement - Response

Immediately call a POISON CENTER or doctor/physician.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.

Precautionary Statement - Storage

Store in a closed container.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

- Not applicable

Other Information

Very toxic to aquatic life.

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Water 7732-18-5	7732-18-5	45-55	*
Glutaraldehyde 111-30-8	111-30-8	45-55	*

*The exact percentages (concentrations) have been withheld as trade secrets.

4. FIRST AID MEASURES

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. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.
Skin contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction.
Inhalation	Immediate medical attention is required. Move to fresh air. Artificial respiration and/or oxygen may be necessary.
Ingestion	Immediate medical attention is required. Rinse mouth. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms and effects, both acute and delayed

Main Symptoms Corrosive. Asthma-like and/ or skin allergy-like symptoms. Difficulty breathing, respiratory distress. Coughing and/ or wheezing. Burning. Hives. Itching. Rashes. May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Notes to physician Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO₂). Alcohol-resistant foam. Dry chemical.

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

May form peroxides of unknown stability. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

Hazardous Combustion Products

Thermal decomposition can lead to release of irritating gases and vapors.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Do not touch or walk through spilled material. Avoid contact with skin, eyes and clothing.

Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear personal protective equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Keep container tightly closed.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals.

Incompatible products Strong oxidizing agents. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Glutaraldehyde 111-30-8	Ceiling: 0.05 ppm		-	NIOSH REL: 0.2 ppm Ceiling

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

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin and body protection	Wear protective gloves/clothing. Skin contact should be prevented through use of suitable protective clothing, gloves, and footwear, selected with regard of use conditions and exposure potential.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. 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. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid	Odor	Vinegar-like
Appearance	Colorless Liquid	Odor Threshold	No information available
Color	colorless		
Property	Values	Remarks/ • Method	
ph	4	No information available	
Melting point/range:		No information available	
Boiling point/boiling range	> 100 °C	No information available	
Flash Point	> 93.5 °C	No information available.	
Evaporation rate		No information available	
Flammability (solid, gas)			
upper flammability limit			
lower flammability limit			
Vapor pressure	24 mbar @ 20 °C	No information available	
Vapor density	0.6	No information available	
Specific Gravity		No information available	
Water Solubility	completely soluble	No information available	
Solubility in other solvents		No information available	
Partition coefficient: n-octanol/water		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Viscosity, kinematic		No information available	
Viscosity, dynamic		No information available	
Explosive properties	No information available		
Oxidizing Properties	No information available		
Other information			
Softening point	No information available		
Density VALUE	No information available		
Bulk Density VALUE	No information available		

10. STABILITY AND REACTIVITY

Reactivity

None under normal use conditions.

Chemical stability

Stable under normal conditions. May form explosive peroxides.

Possibility of hazardous reactions

Nonhazardous polymerization may occur. Avoid initiators, accelerators, heat, pressure, contamination. incompatible materials.

Hazardous Polymerization

Nonhazardous polymerization may occur. Avoid initiators, accelerators, heat, pressure, contamination. incompatible materials.

Conditions to Avoid

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

Incompatible Materials

Strong oxidizing agents. Bases.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Inhalation	Harmful by inhalation. May cause irritation of respiratory tract. Although it is known that glutaraldehyde is a respiratory tract irritant and may aggravate pre-existing asthmatic disorders, the supporting data for respiratory sensitization are less conclusive.
Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	Harmful in contact with skin. Causes burns. May cause sensitization by skin contact.
Ingestion	Toxic if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts. Can burn mouth, throat, and stomach. Harmful if swallowed.

Toxicology data for the components

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Glutaraldehyde 111-30-8	200 mg/kg (Rat) (50% glutaraldehyde in water)	1749 mg/kg (Rat) (50% glutaraldehyde in water)	0.51 mg/L (4hr Rat)
Water 7732-18-5	90,000 mg/kg (Rat)	-	-

Chemical Name	Other applicable information
Glutaraldehyde	Causes eye burns Causes skin burns. Skin Sensitization Respiratory Sensitizer

Information on toxicological effects**Symptoms**

Causes burns. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	May cause sensitization by inhalation. May cause sensitization by skin contact.
mutagenic effects	No information available.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	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.
Target Organ Effects	Respiratory system, Eyes, Skin, Teeth.
Aspiration Hazard	No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (inhalation-dust/mist)	1 mg/L
Oral LD50	200 mg/kg (rat)
Dermal LD50	1749 mg/kg (rat)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Glutaraldehyde 111-30-8	0.61: 72 h Desmodesmus subspicatus mg/L EC50 0.84: 96 h Desmodesmus subspicatus mg/L EC50	2.6 - 4.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7.8 - 13: 96 h Oncorhynchus mykiss mg/L LC50 static 7.8 - 22: 96 h Lepomis macrochirus mg/L LC50 static 5.4: 96 h Pimephales promelas mg/L LC50 static		0.56 - 1.0: 48 h Daphnia magna mg/L EC50 Static 14: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation:

No information available.

Chemical Name	log Pow
Glutaraldehyde 111-30-8	0.22

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods

Should not be released into the environment.

Contaminated packaging US EPA Waste Number

Do not re-use empty containers. Dispose of in accordance with local regulations.
D002

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Glutaraldehyde 111-30-8	Toxic

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	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde
Hazard class	8
Packing Group	II
Special Provisions	B2, IB2, T11, TP2, TP27
Emergency Response Guide Number	153

TDG

UN/ID No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde
Hazard class	8
Packing Group	II

ICAO/IATA

UN/ID No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde
Hazard class	8
Packing Group	II
Special Provisions	A3, A803

IMDG/IMO

UN/ID No	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde
Hazard class	8
Packing Group	II
EmS No.	F-A, S-B
Special Provisions	274
Marine pollutant	Glutaraldehyde

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

15. REGULATORY INFORMATION

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 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 does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

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

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Glutaraldehyde - 111-30-8		Group IV		

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

TSCA

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping		
Glutaraldehyde	PAIR: 09/30/1991		
Component	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances		
Glutaraldehyde 111-30-8 (45-55)	09/30/1991		

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
Glutaraldehyde	X	X	X		X

International Regulations

Mexico - Grade Serious risk, Grade 3

Chemical Name	Carcinogen Status	Exposure Limits
Glutaraldehyde		Mexico: Ceiling 0.2 ppm Mexico: Ceiling 0.7 mg/m ³

16. OTHER INFORMATION

NFPA	Health Hazard 3	Flammability 1	Instability 0
HMIS	Health Hazard 3	Flammability 1	Physical Hazard 0

Revision Date 2014-03-18
Revision Note (M)SDS sections updated

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet