Carestream

SAFETY DATA SHEET

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

Identification of the substance or mixture

Product name: X-OMAT ICM F-1 Fixer and Replenisher, Part A
KODAK X-OMAT ICM F-1 Fixer and Replenisher, Part A

Product code: 6610182A
Pure substance/mixture Mixture

Use of the Substance/Mixture

Product Use: Photographic chemical.

Company/Undertaking Identification

Supplier Carestream Health Japan Co., Ltd., 2-27-1 Shinkawa, Chuo-ku, Tokyo, Japan

For further information, please contact:
For environment, health and safety information, email: WW-EHS@carestreamhealth.com

Emergency telephone

Emergency telephone +(81)-345209637

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2B

GHS Label elements, including precautionary statements

WARNING

Hazard statements
H320 - Causes eye irritation

Precautionary Statements
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/ attention

Other hazards which do not result in classification

General Hazards
Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %
Water	40-60
Ammonium thiosulfate	35-45
Sodium thiosulfate	1-5
Ammonium sulfite	1-5
Acetic acid	1-3
Ammonium acetate	1-5
Sodium acetate	1-5

4. FIRST AID MEASURES

Description of necessary first-aid measures

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

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.

Skin contact Remove contaminated clothing and shoes. Wash off with soap and water. Wash contaminated clothing before reuse.

Inhalation Move to fresh air.

Ingestion 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.

Most important symptoms/effects, acute and delayed

Skin contact Substance may cause slight skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Eye contact Contact with 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.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Use CO2, dry chemical, or foam.

Extinguishing media which shall not be used for safety reasons	None.

Specific hazards arising from the chemical

Special Hazard	Thermal decomposition can lead to release of irritating and toxic gases and vapors. 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).

Special protective actions for fire-fighters

Special protective equipment for fire-fighters	Wear self-contained breathing apparatus and protective suit.

Other information

Other information	Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. For personal protection see section 8.

Advice for emergency responders
For personal protection see section 8

Environmental precautions

Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. Try to prevent the material from entering drains or water courses.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.
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 Ecological information.

7. HANDLING AND STORAGE

Precautions for safe handling

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

Conditions for safe storage, including any incompatibilities

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

Materials to Avoid Halogenated compounds. Strong oxidizing agents. Bases. Acids. Contact with strong acids liberates sulfur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits Ingredients with workplace control parameters

Chemical Name	Japan	European Union	ACGIH TLV
Acetic acid	OEL 10 ppm OEL 25 mg/m^3	TWA 10 ppm TWA 25 mg/m^3	STEL 15 ppm TWA: 10 ppm

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment (PPE)

Personal Protective Equipment

General Information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Respiratory protection Use only with adequate ventilation. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Eye Protection If splashes are likely to occur, wear:. Tightly fitting safety goggles.

Skin and body protection Wear suitable protective clothing. Protective shoes or boots.

Hand Protection Protective gloves

Hygiene measures When using, do not eat, drink or smoke. Wear suitable gloves and eye/face protection. Wash hands before breaks and at the end of workday. Wash hands with water as a precaution. Regular cleaning of equipment, work area and clothing is recommended. Avoid breathing vapors, mist or gas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid
ph 4.4
Flash point: Does not flash
Boiling point/boiling range > 100 °C

Odor Acetic
Color colorless - yellow, green
Autoignition temperature: No information available

Vapor Pressure 24 mbar @ 20 °C
Vapor density 0.6
Density 1.343 g/cm3
Water Solubility completely soluble
Melting point/range: No information available
Specific Gravity 1.292
Bulk Density: No information available

10. STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

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

Conditions to Avoid

Heat, flames and sparks. Take precautionary measures against static discharges.

Materials to Avoid

Halogenated compounds. Strong oxidizing agents. Bases. Acids. Contact with strong acids liberates sulfur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

Hazardous Decomposition Products

Ammonia. Chloramine. Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity - Product Information

Skin contact Substance may cause slight skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Eye contact Contact with 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 2.02% of the mixture consists of ingredient(s) of unknown toxicity

Oral 4,658.00 mg/kg

Dermal 14,760.48 mg/kg

Inhalation

Gas No information available

Mist 92.82 mg/L

Vapor No information available

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)		

Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h
Sodium acetate	3530 mg/kg (Rat)	10 g/kg (Rabbit)	30 g/m³ (Rat) 1 h

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.

Aggravated Medical Conditions None known.

Subchronic toxicity

Chronic toxicity

Sensitization Repeated or prolonged contact may cause allergic reactions in very susceptible persons.
Neurological effects No information available.
Target Organ Effects Eyes.

CMR Effects

Carcinogenicity Contains no ingredient listed as a carcinogen.

mutagenic effects No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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.

Acute aquatic toxicity Product Information
No information available

Acute aquatic toxicity 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	
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 acetate			EC50 > 1000 mg/L 48 h (Daphnia magna)

Persistence and degradability
Readily biodegradable.

Bioaccumulative potential
No information available

Chemical Name	log Pow
Acetic acid	-0.31

Mobility in soil
No information available

13. DISPOSAL CONSIDERATIONS

Waste from Residues / Unused Products 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.

ADR/RID Not regulated

IMDG/IMO Not regulated

ICAO/IATA Not regulated

ADN Not regulated

TDG Not regulated

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

15. REGULATORY INFORMATION

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
DSL/NDSL	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

National regulatory information

Chemical Name	Dangerous Substances	organic solvent	Harmful Substances Whose Names Are to be Indicated on the Label	Biological monitoring
Acetic acid	Flammable substance >0.1 %	not applicable	not applicable	

Chemical Name	Restrictions on use	Threshold limits
Acetic acid - 64-19-7	4	

16. OTHER INFORMATION

Revision Date	2013-11-05
Revision Note	(M)SDS sections updated

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

End of Material Safety Data Sheet