

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

Manufacturer: Kodak (Wuxi) Company Ltd,
No. 18, Changjiang Road,
Wuxi, JiangSu Province,
China 214028

For further information, please contact:

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

Emergency telephone

For Chemical Emergency Information, call: 0510-85252120

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute oral toxicity	Category 5
Serious eye damage/eye irritation	Category 2B

GHS Label elements, including precautionary statements

WARNING

Hazard statements

H303 - May be harmful if swallowed
H320 - Causes eye irritation

Precautionary Statements

P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
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

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.
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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

Chemical Name	Taiwan	China	ACGIH TLV	European Union
Acetic acid	STEL 15 ppm STEL 37.5 mg/m ³	TWA 10 mg/m ³ STEL 20 mg/m ³	STEL 15 ppm TWA: 10 ppm	TWA 10 ppm TWA 25 mg/m ³

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: Safety glasses with side-shields
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

Odor Acetic
Color colorless - yellow, green

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

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/m ³ (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 occurred, and the ventilation rate in the room.	

Aggravated Medical Conditions None known.

Subchronic toxicity
no data available

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.

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
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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/NDL - 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

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