

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

Identification of the substance or mixture

Product name: KODAK Hypo Test Kit
X-OMAT Hypo Test Kit
Product code: 1965847
Synonyms PCD 3756

Use of the Substance/Mixture

Product Use: Restricted to professional users, Film Testing Solution.
Restrictions on use

Company/Undertaking Identification

Supplier: Carestream Health Taiwan Limited, 4F-1, No. 129, Sec.2, Zhongshan N. Rd., Zhongshan Dist., Taipei, 10448, Taiwan R.O.C.

For further information, please contact:

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

Emergency telephone

00801-14-8954

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Specific target organ systemic toxicity (single exposure)	Category 3
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1
Corrosive to Metals	Category 1

GHS Label elements, including precautionary statements



DANGER

Hazard statements

H290 - May be corrosive to metals
H315 - Causes skin irritation
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P273 - Avoid release to the environment
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P321 - Specific treatment (see supplemental first aid instructions on this label)
P332 + P313 - If skin irritation occurs: Get medical advice/ attention
P362 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/ physician
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
P390 - Absorb spillage to prevent material damage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P406 - Store in corrosive resistant container with a resistant inliner
P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %
Water	>95
Acetic acid	1-5
Silver nitrate	0.25-1

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.
Main Symptoms	Irritation Difficulty breathing Coughing and/ or wheezing
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician immediately.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Seek immediate medical attention/advice.
Inhalation	Move to fresh air. Get medical attention immediately if symptoms occur.

Ingestion	Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
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Most important symptoms/effects, acute and delayed

Skin contact	Irritating to skin.
Eye contact	Irritating to eyes. Risk of serious damage to eyes.
Inhalation	Irritating to respiratory system.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting 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

Flash point:	See chapter 9. PHYSICAL AND CHEMICAL PROPERTIES
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Suitable Extinguishing Media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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Extinguishing media which shall not be used for safety reasons	None.
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Specific hazards arising from the chemical

Special Hazard	Thermal decomposition can lead to release of irritating and toxic gases and vapors.
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Special protective actions for fire-fighters

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

Other information	In the event of fire, cool tanks with water spray.
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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Do not touch or walk through spilled material.

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.

Contain the spill. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

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.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store in corrosive resistant container with a resistant inliner.

Materials to Avoid None.

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
Silver nitrate	STEL 0.03 mg/m ³		TWA: 0.01 mg/m ³	TWA 0.01 mg/m ³

Appropriate engineering controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

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. In case of insufficient ventilation wear suitable respiratory equipment.
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	Impervious gloves

Hygiene measures

When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid

ph 2.4

Flash point: > 93.4 °C

Boiling point/boiling range > 100 °C

Odor Vinegar-like

Color colorless

Autoignition temperature: No information available

Vapor Pressure 24 mbar @ 20 °C

Vapor density 0.6

Density No information available

Volatile organic compounds (VOC) content 95 - 99

Water Solubility completely soluble

Melting point/range: No information available

Specific Gravity 1.01

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

None under normal processing.

Conditions to Avoid

Heat.

Materials to Avoid

None.

Hazardous Decomposition Products

None under normal use.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Product Information.

Skin contact

Eye contact

Inhalation

Ingestion

Irritating to skin.

Irritating to eyes. Risk of serious damage to eyes.

Irritating to respiratory system.

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

Acute toxicity	0% of the mixture consists of ingredient(s) of unknown toxicity
Oral	103,092.78 mg/kg
Dermal	32,894.74 mg/kg
Inhalation	
Gas	No information available
Mist	354.03 mg/L
Vapor	No information available

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90,000 mg/kg (Rat)		
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h
Silver nitrate	1173 mg/kg (Rat)		
Chemical Name	Other applicable information		
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 Respiratory disorders, Preexisting eye disorders, Skin disorders.

Subchronic toxicity

no data available

Chronic toxicity

Chronic toxicity	Effects expected to be similar to those seen acutely.
Sensitization	No information available.
Neurological effects	No information available.
Target Organ Effects	Skin, Eyes, Respiratory system.

CMR Effects

Carcinogenicity This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B): Silver nitrate. The IARC classification only applies to ingested nitrites and nitrate which is not a likely route of exposure in the occupational environment.

Chemical Name	IARC	China
Silver nitrate 7761-88-8	2A	
IARC: (International Agency for Research on Cancer) Group 2A - Probably Carcinogenic to Humans		

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic organisms.

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
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)
Silver nitrate		LC50 0.00512 - 0.00787 mg/L Poecilia reticulata 96 h LC50 0.009 - 0.02 mg/L Lepomis macrochirus 96 h LC50 0.0242 - 0.0484 mg/L Lepomis macrochirus 96 h LC50 0.05 - 0.07 mg/L Lepomis macrochirus 96 h LC50 0.001339 - 0.001637 mg/L Oncorhynchus mykiss 96 h LC50= 0.0075 mg/L Oncorhynchus mykiss 96 h LC50 0.00839 - 0.1802 mg/L Oncorhynchus mykiss 96 h LC50 0.00452 - 0.00638 mg/L Pimephales promelas 96 h LC50 0.00181 - 0.00214 mg/L Pimephales promelas 96 h LC50 0.0064 - 0.0106 mg/L Pimephales promelas 96 h LC50= 0.009 mg/L Pimephales promelas 96 h LC50= 0.0027 mg/L Cyprinus carpio 96 h	EC50 = 0.0006 mg/L 48 h (Daphnia magna) EC50 0.0008 - 0.001 mg/L 48 h (Daphnia magna) EC50 0.0008 - 0.0011 mg/L 48 h (Daphnia magna)

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Chemical Name	log Pow
Acetic acid	-0.31

13. DISPOSAL CONSIDERATIONS

Waste from Residues / Unused Products

Should not be released into the environment. 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

UN/ID No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Technical Name	Acetic acid, Silver nitrate
Hazard class	8
Packing Group	III
Classification Code	C9

ADR/RID-Labels	8
Special Provisions	274
ADR Hazard Id (Kemmler Number)	80
Limited Quantity	5 L

IMDG/IMO

UN/ID No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Technical Name	Acetic acid, Silver nitrate
Hazard class	8
Packing Group	III
Marine Pollutant	NP
EmS No.	F-A, S-B
Special Provisions	274
Limited quantity DFDA	5 L

ICAO/IATA

UN/ID No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Technical Name	Acetic acid, Silver nitrate
Hazard class	8
Packing Group	III
ERG Code	8L
Special Provisions	A3, A803
Limited quantity DFDA	1 L

ADN

UN/ID No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Technical Name	Acetic acid, Silver nitrate
Hazard class	8
Packing Group	III
Classification Code	C9
Special Provisions	274
Limited quantity DFDA	5 L

DOT

UN/ID No	UN1760
Proper Shipping Name	Corrosive liquids, n.o.s.
Technical Name	Acetic acid, Silver nitrate
Hazard class	8
Packing Group	III
Special Provisions	IB3, T7, TP1, TP28

TDG

UN/ID No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Technical Name	Acetic acid, Silver nitrate
Hazard class	8
Packing Group	III

This product meets the requirements of the limited quantity exemption. The shipping case will be marked as a limited quantity. It does not require other labeling or placarding except if transported by aircraft. 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

China

Revision Date	2013-03-07
Revision Note	Initial Release

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