Carestream

MATERIAL SAFETY DATA SHEET.

Issuing date 2011-09-21 **Revision Date** 2011-09-21 **Version** 2

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

Product name: KODAK Hypo Test Kit.

Product code: 1965847

Supplier Carestream Health, Inc., 150 Verona Street, Rochester, New York 14608.

For Emergency Health Information call: 800-424-9300.

For other information contact: 800-328-2910.

Synonyms PCD 3756.
Product Use: Photographic chemical.

2. HAZARDS IDENTIFICATION

Warning!.

Emergency Overview

Causes eye irritation.

Physical state liquid. **Odor** Vinegar-like. **Color** colorless.

HMIS **Health Hazard** - 2 **Flammability** - 1 **Physical Hazard** - 0

Potential Health Effects

Eyes Irritating to eyes.

Skin May cause irritation.

Inhalation Expected to be a low hazard for recommended handling. May cause irritation of respiratory tract.

Ingestion Expected to be a low hazard for recommended handling. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects

Chronic toxicity Effects expected to be similar to those seen acutely.

Aggravated Medical Conditions Respiratory disorders.

Environmental hazard See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous

Chemical Name	CAS-No	Weight %
Acetic acid	64-19-7	1-5

Silver nitrate	7761-88-8	0.1-1

Non-Hazardous

Chemical Name	CAS-No	Weight %
Water	7732-18-5	>95

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, also under the eyelids. Get medical attention immediately if symptoms occur.

Skin contact Wash off immediately with plenty of water. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Ingestion Do NOT induce vomiting.

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point: . >. 93.4 °C.

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

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

Hazardous Combustion Products Hazardous decomposition products due to incomplete combustion.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions For personal protection see section 8. Ensure adequate ventilation.

Methods for Containment Prevent further leakage or spillage if safe to do so.

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

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	
Silver nitrate 7761-88-8	TWA: 0.01 mg/m^3		TWA: 0.01 mg/m^3	

Occupational Exposure Controls

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

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.

Skin and body protection Wear suitable protective clothing.

Hand Protection Impervious gloves.

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

Stability Stable under normal conditions.

Incompatible products None known.

Conditions to Avoid Heat.

Hazardous Decomposition Products None under normal use.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Product Information.

Skin May cause irritation.

Eyes Irritating to eyes.

Inhalation Expected to be a low hazard for recommended handling. May cause irritation of respiratory tract.

Ingestion Expected to be a low hazard for recommended handling. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute toxicity Component Information.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90 mL/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 occured, and the ventilation rate in the room

Subchronic toxicity No information available.

Chronic toxicity Effects expected to be similar to those seen acutely.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silver nitrate		2A		X

Target Organ Effects Eyes, Respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects Very toxic to aquatic organisms. After dilution with a large amount of water, followed by secondary waste treatment, this material is not expected to cause adverse environmental effects.

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 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 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

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 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 %
Silver nitrate - 7761-88-8	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
Acetic acid	5000 lb			X
Silver nitrate	1 lb	X		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
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Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Product RQ
Acetic acid	5000 lb		
Silver nitrate	1 lb		

TSCA
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Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping
Water	Partially exempt chemical substance termed Petroleum Process Stream

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
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Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Acetic acid	X	X	X		X
Silver nitrate	X	X	X		X

International Regulations

Mexico - Grade Moderate risk, Grade 2.

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
Silver nitrate		Mexico: TWA 0.01 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.

Warning!.

Contains:.

Hazardous Components

Chemical Name	CAS-No	Weight %
Acetic acid	64-19-7	1-5
Silver nitrate	7761-88-8	0.1-1

Causes eye irritation.

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

Additional information is given in the Material Safety Data Sheet.

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.