

MATERIAL SAFETY DATA SHEET.

Issuing date 2011-09-21

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Version 2

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

Product name: KODAK INDUSTREX Single Part Developer Replenisher, Working Solution.

Product code: 1043017WS

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.

Product Use: Photographic chemical.

2. HAZARDS IDENTIFICATION

Warning!.

Emergency Overview

Causes eye irritation
May be harmful if swallowed

Physical state liquid.

Odor Odorless.

Color yellow.

HMIS

Health Hazard - 2*

Flammability - 1

**Physical - 0
Hazard**

Potential Health Effects

Eyes

Irritating to eyes.

Skin

May cause skin irritation and/or dermatitis. Prolonged or repeated contact may dry skin and cause irritation.

Inhalation

No hazard from product as supplied. May cause irritation of respiratory tract. Contact with strong acids liberates sulfur dioxide.

Ingestion

May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Chronic Effects

Chronic toxicity

Effects expected to be similar to those seen acutely.

Aggravated Medical Conditions

Preexisting eye disorders. Skin disorders. Respiratory disorders.

Environmental hazard

See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous

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Chemical Name	CAS-No	Weight %
Potassium sulfite	10117-38-1	1-5
Hydroquinone	123-31-9	1-5
3-Pyrazolidinone, 4-(hydroxymethyl)-4-methyl-1-phenyl-	13047-13-7	0.1-1

Non-Hazardous

Chemical Name	CAS-No	Weight %
Water	7732-18-5	>90

4. 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	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. 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	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.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point:	Not flammable.
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 - 2** **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
Hydroquinone 123-31-9	TWA: 1 mg/m ³		TWA: 2 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. If splashes are likely to occur, wear:: Goggles.

Skin and body protection Wear suitable protective clothing.

Hand Protection Impervious gloves.

Other Protective Equipment Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid.

ph . 10.3 - 10.5

Flash point: Not flammable.

Boiling point/boiling range . 100 °C.

Odor Odorless.

Color yellow.

Autoignition temperature: No information available.

Vapor Pressure . 24 mbar @ 20 °C.

Vapor density . 0.6

Density No information available.

Volatile organic compounds (VOC) content 85 - 100

Water Solubility No information available.

Melting point/range: No information available.

Specific Gravity No information available.

Bulk Density: No information available.

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Incompatible products	Oxidizing agents. Strong acids.
Conditions to Avoid	Heat, flames and sparks.
Hazardous Decomposition Products	Carbon oxides, Sulfur oxides.
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	Contact with strong acids liberates sulfur dioxide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Product Information.

Skin	May cause skin irritation and/or dermatitis. Prolonged or repeated contact may dry skin and cause irritation.
Eyes	Irritating to eyes.
Inhalation	No hazard from product as supplied. May cause irritation of respiratory tract. Contact with strong acids liberates sulfur dioxide.
Ingestion	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Acute toxicity Component Information.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90 mL/kg (Rat)		
Hydroquinone	320 mg/kg (Rat)	> 4800 mg/kg (Rat)	
3-Pyrazolidinone, 4-(hydroxymethyl)-4-methyl-1-phenyl-	566 mg/kg (Rat)		

Chemical Name	Other applicable information
Potassium sulfite	Mild skin irritation - Moderate skin irritation

Hydroquinone	<p>Moderate eye irritation</p> <p>Causes sensitization on guinea-pigs</p> <p>Mild skin irritation</p> <p>Can be absorbed through skin (1.1 ug/cm2/hr)</p> <p>Negative in bacterial mutagenicity assays. Evidence for mutagenicity (chromosome breakage, sister-chromatid exchanges) in in vivo and in vitro animal studies</p> <p>Hydroquinone has been classified as a Category 3 mutagen and carcinogen by the European Union based on testing of rats and mice given hydroquinone by stomach tube or at high dietary levels. The International Agency for Research on Cancer (IARC) under ranking for cancer potential has classified hydroquinone in Group 3, i.e. "not classifiable" as a carcinogen. In the European Union a Category 3 mutagen attracts the risk phrase R68 "Possible risk of irreversible effects" at concentrations above 1%, and a Category 3 carcinogen attracts the risk phrase R40 "Limited evidence of a carcinogenic effect" at concentrations above 1%. Exposure to products containing such substances should be controlled to below established control limits and special care should be taken with pregnant or breast-feeding women to ensure appropriate controls are in place to control the risk</p>
3-Pyrazolidinone, 4-(hydroxymethyl)-4-methyl-1-phenyl-	<p>Mild skin irritation</p> <p>Skin Sensitization - Slight</p> <p>Eye Irritation - Strong</p> <p>Based on repeated-dose ingestion studies in animals, this chemical may cause blood, testicular, and adverse reproductive effects</p>

Subchronic toxicity No information available.

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

Carcinogenicity Contains a known or suspected carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydroquinone	A3			

ACGIH: (American Conference of Governmental Industrial Hygienists)
 A3 - Animal Carcinogen

Sensitization	This mixture contains hydroquinone which is classified as a dermal sensitizer in some jurisdictions. A very similar mixture was negative in dermal sensitization studies with and without prior sensitization to hydroquinone. Based on the results of these studies, this mixture is not expected to present a dermal sensitization hazard to humans.
mutagenic effects	No specific testing was done on this product. Mutagenic testing of the hazardous ingredient in this product has resulted in some positive mutagenic results.
Reproductive toxicity	Contains ingredients that are suspected reproductive hazards. However, based on available data the product should not be classified for reproductive effects.
Target Organ Effects	Skin, Eyes, Respiratory system, Reproductive system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects Harmful to aquatic organisms.

Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Potassium sulfite		LC50 220 - 460 mg/L <i>Leuciscus idus</i> 96 h	
Hydroquinone	13.5 mg/L EC50 120 h (<i>Desmodesmus subspicatus</i>) 0.335 mg/L EC50 72 h (<i>Pseudokirchneriella subcapitata</i>)	LC50= 0.044 mg/L <i>Oncorhynchus mykiss</i> 96 h LC50= 0.044 mg/L <i>Pimephales promelas</i> 96 h LC50 0.1 - 0.18 mg/L <i>Pimephales promelas</i> 96 h LC50= 0.17 mg/L <i>Brachydanio rerio</i> 96 h	EC50 = 0.29 mg/L 48 h (<i>Daphnia magna</i>)

Persistence and degradability No data is available on the product itself. Expected to be readily biodegradable.

Bioaccumulation: No information available.

Mobility No information available.

Chemical Name	log Pow
Hydroquinone	0.5

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	Should not be released into the environment. 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.

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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 %
Hydroquinone - 123-31-9	1.0

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)

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Chemical Name	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hydroquinone - 123-31-9		Group I		

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Product RQ
Hydroquinone	100 lb	100 lb	

TSCA

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

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances
Hydroquinone	10/04/1984

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
Hydroquinone	X	X	X	X	X

International Regulations

Mexico - Grade Moderate risk, Grade 2.

Chemical Name	Carcinogen Status	Exposure Limits
Hydroquinone	A3	Mexico: TWA 2 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

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Hydroquinone	123-31-9	1-5
3-Pyrazolidinone, 4-(hydroxymethyl)-4-methyl-1-phenyl-	13047-13-7	0.1-1

Causes eye irritation. May be harmful if swallowed.

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.
