

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

Identification of the substance or mixture

Product name: CARESTREAM DENTAL X-ray Monobath
Product code: 4983078
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: EMEAHS@carestream.com

Emergency telephone

For Chemical Emergency Information, call: 0510-85252120

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 2
Acute aquatic toxicity	Category 2

GHS Label elements, including precautionary statements



WARNING

Hazard statements

H319 - Causes serious eye irritation
H317 - May cause an allergic skin reaction
H341 - Suspected of causing genetic defects
H351 - Suspected of causing cancer
H401 - Toxic to aquatic life

Precautionary Statements

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P272 - Contaminated work clothing should not be allowed out of the workplace
P273 - Avoid release to the environment
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
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
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
P362 - Take off contaminated clothing and wash before reuse
P308 + P313 - IF exposed or concerned: Get medical advice/ attention
P405 - Store locked up
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	80-90
Sodium thiosulfate	1-10
Sodium sulfite	1-10
Trisodium phosphate	1-10
Hydroquinone	1-10

4. FIRST AID MEASURES

Description of necessary first-aid measures

General advice	Show this material safety data sheet to the doctor in attendance.
Main Symptoms	Irritation Rashes Itching
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. Seek immediate medical attention/advice.
Skin contact	Wash off with warm water and soap. Remove and wash contaminated clothing before re-use. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. Consult a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Protection of First-aiders Use personal protective equipment.

Most important symptoms/effects, acute and delayed

Skin contact May cause sensitization by skin contact.

Eye contact May cause eye irritation.

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

Ingestion Low order of toxicity based on components. May be harmful if swallowed.

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

Notes to physician May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Dry chemical, CO₂, water spray or alcohol-resistant 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.

Special protective actions for fire-fighters

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

Other information

Other information None known.

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.

Advice for emergency responders
For personal protection see section 8

Environmental precautions

Prevent further leakage or spillage if safe to do so. 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. Dike far ahead of liquid spill for later disposal. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). 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. Wash thoroughly after handling. Wear personal protective equipment.

Prevention of fire and explosion Keep from contact with oxidizing materials.

Conditions for safe storage, including any incompatibilities

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

Materials to Avoid Acids. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Chemical Name	Taiwan	China	ACGIH TLV	European Union
Hydroquinone	STEL 4 mg/m ³	TWA 1 mg/m ³ STEL 2 mg/m ³	TWA: 1 mg/m ³	

Appropriate engineering controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

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 In case of insufficient ventilation wear suitable respiratory equipment.

Eye Protection Tightly fitting safety goggles

Skin and body protection

Wear protective gloves/ protective clothing.

Hand Protection

Chemical resistant gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion

Hygiene measures

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid

ph 10.2

Flash point: Does not flash

Boiling point/boiling range > 100 °C

Vapor Pressure 24 mbar @ 20 °C

Vapor density 0.6

Density No information available

Water Solubility completely soluble

Melting point/range: No information available

Specific Gravity 1.14

Bulk Density: No information available

Odor Odorless

Color colorless

Autoignition temperature: 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.

Conditions to Avoid

Do not freeze.

Materials to Avoid

Acids. Strong oxidizing agents.

Hazardous Decomposition Products

Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity - Product Information.

Skin contact	May cause sensitization by skin contact.
Eye contact	May cause eye irritation.
Inhalation	Expected to be a low hazard for recommended handling. May cause irritation of respiratory tract.
Ingestion	Low order of toxicity based on components. May be harmful if swallowed.
Acute toxicity	0.02% of the mixture consists of ingredient(s) of unknown toxicity
Oral	5,140.89 mg/kg
Dermal	25,816.64 mg/kg
Inhalation	
Gas	No information available
Mist	14.11 mg/L
Vapor	No information available

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90,000 mg/kg (Rat)		
Sodium thiosulfate	5000 mg/kg (Rat)		
Sodium sulfite	820 mg/kg (Rat)		22 mg/L (Rat) 1 h 5.5 mg/L (Rat) 4 h
Trisodium phosphate	2000 mg/kg (Rat)	> 1000 mg/kg (Guinea Pig)	2.16 mg/L (Rat) 1 h
Hydroquinone	320 mg/kg (Rat)	> 4800 mg/kg (Rat)	

Chemical Name	Other applicable information
Sodium thiosulfate	Mild skin irritation
Sodium sulfite	No skin irritation Mild eye irritation
Trisodium phosphate	Moderate skin irritation Severe eye irritation
Hydroquinone	Moderate eye irritation Causes sensitization on guinea-pigs. Mild skin irritation Can be absorbed through skin. (1.1 ug/cm2/hr) Negative in bacterial mutagenicity assays. Evidence for mutagenicity (chromosome breakage, sister-chromatid exchanges) in in vivo and in vitro animal studies. 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.

Aggravated Medical Conditions Skin disorders, Preexisting eye disorders, Allergies.

Subchronic toxicity
no data available

Chronic toxicity

Chronic toxicity	Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.
Sensitization	May cause sensitization by skin contact.
Neurological effects	No information available.
Target Organ Effects	Respiratory system.

CMR Effects

Carcinogenicity Contains a known or suspected carcinogen.

No specific testing was done on this product. Mutagenic testing of the hazardous ingredient in this product has resulted in some positive mutagenic results.

Chemical Name	GHS-Germ cell Mutagenicity	Japan
Hydroquinone	2	

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated

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 <i>Gambusia affinis</i> 96 h	
Sodium sulfite		LC50 220 - 460 mg/L <i>Leuciscus idus</i> 96 h	LC50 = 330 mg/L 24 h (<i>Psammechinus miliaris</i>)
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

Expected to be readily biodegradable

Bioaccumulative potential

No information available

Chemical Name	log Pow
Sodium sulfite	-4
Hydroquinone	0.5

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.

<u>ADR/RID</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated
<u>ICAO/IATA</u>	Not regulated
<u>ADN</u>	Not regulated
<u>TDG</u>	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

16. OTHER INFORMATION

Revision Date 2013-09-06
Revision Note (M)SDS sections updated, Classification update

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