Carestream DENTAL

SAFETY DATA SHEET

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

Identification of the substance or mixture

Product name: KODAK READYPRO Fixer
READYPRO Fixer

Product code: 1176262FIX

Pure substance/mixture Mixture

Use of the Substance/Mixture

Restricted to professional users, Photographic chemical.
Restricted to professional users.

Company/Undertaking Identification

Supplier CARESTREAM DO BRASIL COMÉRCIO E SERVIÇOS DE PRODUTOS MÉDICOS LTDA
Rua Dr. Pedro Luiz de Oliveira Costa, 60 - Limoeiro
São José dos Campos - SP - Brasil
CEP: 12241-420

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

For other information contact:
0800 891 7554
891 7555

Emergency telephone

CHEMTREC Brazil: +(55)-2139581449

2. HAZARDS IDENTIFICATION

Classification According to Standard ABNT NBR 1475:2012

Classification of the substance or mixture

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B

GHS Label elements, including precautionary statements

WARNING
Hazard statements
H315 - Causes skin irritation
H320 - Causes eye irritation

Precautionary Statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
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
P332 + P313 - If skin irritation occurs: Get medical advice/ attention

Other hazards which do not result in classification

May cause respiratory tract irritation
May be harmful if swallowed

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Symbol(s)
Not dangerous

Label Elements

Symbol(s) Not dangerous.

Contains Sodium sulfite
R - phrase(s)
None

Classification According to US OSHA 1910.1200 (HazCom 1994)

Warning!
May be harmful if swallowed
May cause skin and eye irritation

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %
Water	80-90
Ammonium thiosulfate	10-15
Acetic acid	1-5
Ammonium sulfite	0.1-1
Sodium sulfite	0.1-1
Sodium borate	0.1-1

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.

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. Get medical attention immediately if symptoms occur.

Ingestion Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms/effects, acute and delayed

Skin contact May cause irritation.

Eye contact May cause eye irritation.

Inhalation Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. May cause irritation of respiratory tract. May be harmful if inhaled.

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.

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

Specific hazards arising from the chemical

Special Hazard	Dried product residue can act as a reducing agent.

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

For personal protection see section 8. Ensure adequate ventilation.

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

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 Acids. Strong bases. Oxidizing agents. Halogenated compounds. Contact with strong acids liberates sulfur dioxide. Contact with strong bases liberates ammonia. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Chemical Name	ACGIH TLV	Argentina	Brazil	Chile	Venezuela
Acetic acid	STEL 15 ppm TWA: 10 ppm	TWA: 10 ppm STEL: 15 ppm	TWA: 8 ppm TWA: 20 mg/m³	TWA: 8 ppm TWA: 20 mg/m³ STEL: 15 ppm STEL: 37 mg/m³	TWA: 10 ppm STEL: 15 ppm
Sodium borate	STEL 6 mg/m³ TWA: 2 mg/m³	TWA: 1 mg/m³			TWA: 1 mg/m³

Appropriate engineering controls

Engineering Measures 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 None under normal use conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

Eye Protection Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles.

Skin and body protection Wear suitable protective clothing. Impervious clothing.

Hand Protection Impervious 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 Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid
ph 4.4
Flash point: > 93.600 °C
Boiling point/boiling range > 100 °C

Odor Ammonia
Color light yellow
Autoignition temperature: No information available

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 1.09
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. Contact with strong acids liberates sulfur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong bases liberates ammonia.

Conditions to Avoid

Do not freeze. Extreme pH's.

Materials to Avoid

Acids. Strong bases. Oxidizing agents. Halogenated compounds. Contact with strong acids liberates sulfur dioxide. Contact with strong bases liberates ammonia. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

Hazardous Decomposition Products

Ammonia. Chloramine. Sulfur oxides. Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Acute toxicity - Product Information

Skin contact May cause irritation.

Eye contact May cause eye irritation.

Inhalation Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. May cause irritation of respiratory tract. May be harmful if inhaled.

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 - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90,000 mg/kg (Rat)		
Ammonium thiosulfate	> 2000 mg/kg (Rat)		

Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h
Ammonium sulfite	2500 mg/kg (Rat)		
Sodium sulfite	820 mg/kg (Rat)		22 mg/L (Rat) 1 h 5.5 mg/L (Rat) 4 h
Sodium borate	2403 mg/kg (Rat)	2000 mg/kg (Rabbit)	

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.
Sodium borate	Based on repeated-dose ingestion studies in animals, may cause adverse reproductive and developmental effects. However, the doses administered were many times those to which humans would normally be exposed.

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

Subchronic toxicity

no data available

Chronic toxicity

Chronic toxicity Prolonged exposure may cause chronic effects.
Sensitization No information available.
Neurological effects No information available.
Target Organ Effects Eyes, Skin, Respiratory system, Teeth.

CMR Effects

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive toxicity Contains a known or suspected reproductive toxin. However, based on available data the product should not be classified for reproductive effects.

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**
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 sulfite		LC50 220 - 460 mg/L Leuciscus idus 96 h	LC50 = 330 mg/L 24 h (Psammechinus miliaris)

Sodium borate	158 mg/L EC50 96 h (Desmodesmus subspicatus) 2.6 - 21.8 mg/L EC50 96 h (Pseudokirchneriella subcapitata)	LC50= 340 mg/L Limanda limanda 96 h	LC50 1085 - 1402 mg/L 48 h (Daphnia magna)

Persistence and degradability
Expected to be readily biodegradable

Bioaccumulative potential
No information available

Chemical Name	log Pow
Acetic acid	-0.31
Sodium sulfite	-4

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/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

International Regulations

Mexico - Grade Slight risk, Grade 1

Chemical Name	Carcinogen Status	Exposure Limits
Acetic acid		Mexico: TWA 10 ppm Mexico: TWA 25 mg/m³ Mexico: STEL 15 ppm Mexico: STEL 37 mg/m³
Aluminum sulfate		Mexico: TWA 2 mg/m³
Sodium borate		Mexico: TWA 1 mg/m³

16. OTHER INFORMATION

Issuing date	2009-12-30
Revision Date	2013-06-21
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