

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision Date 8 February 2019

Version 1.02

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product code: 5060694

Product name: CARESTREAM DENTAL X-ray Fixer

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Photographic chemical. Restricted to professional users.
Uses advised against: No information available

1.3. Details of the supplier of the safety data sheet

Supplier: Carestream Health UK Ltd., 1 Park Lane, Hemel Hempstead, Hertfordshire, HP2 4YG

For further information, please contact:

Product Information: +44 (0)870 6000245
For environment, health and safety information, email: WW-EHS@carestreamhealth.com

1.4. Emergency telephone number

Emergency Telephone: CHEMTREC International 1-703-527-3887
CHEMTREC UK +(44)-870-8200418

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label elements

None.

2.3. Other hazards

None.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC-No	CAS-No	Weight percent	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number	SVHC candidates

Water	Present	7732-18-5	40-45	No hazards have been classified	no data available	
Ammonium thiosulfate	Present	7783-18-8	40-45	no data available	01-2119537325-41	
Sodium sulfite	Present	7757-83-7	5-10	no data available	01-2119537420-49	
Sodium borate	Present	1330-43-4	<3	Repr. 1B (H360FD)	no data available	Reason for inclusion Toxic for reproduction, Article 57c (215-540-4)

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
Inhalation	Remove to fresh air.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product is not flammable.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	No information available.
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5.3. Advice for firefighters

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Do not touch damaged
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containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment as required.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Dyke to collect large liquid spills.

Methods for cleaning up 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.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

Materials to Avoid Strong oxidising agents. Strong acids. Strong bases. Contact with strong acids liberates sulphur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong bases liberates ammonia.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits .

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
Sodium borate	-	STEL 3 mg/m ³	TWA 1 mg/m ³	TWA 2 mg/m ³	-

1330-43-4		TWA 1 mg/m ³	R1	STEL 6 mg/m ³	
Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
Sodium borate 1330-43-4	-	TWA 2 mg/m ³ STEL 6 mg/m ³ C(A4)	-	-	TWA 1 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Sodium borate 1330-43-4	-	STEL 0.8 mg/m ³	-	TWA 1 mg/m ³ STEL 2 mg/m ³	TWA 1 mg/m ³ STEL 3 mg/m ³ Repr1B

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls	Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Ensure that eyewash stations and safety showers are close to the workstation location.
Personal protective equipment	These recommendations apply to the product as supplied
Eye/face protection	No special protective equipment required.
Skin and body protection	No special protective equipment required.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	Do not allow material to contaminate ground water system.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1

Physical state	Liquid
Appearance	No information available
Colour	colourless
Odour	Odourless.
Odour Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks/ • Method</u>
pH	4.9	
Melting point/range:	no data available	no data available
Boiling point/boiling range	> 100 °C	
Flash Point	no data available	No information available
Evaporation rate	no data available	No information available
Flammability (solid, gas)	no data available	No information available
Flammability Limits in Air		No information available
Upper flammability limit	no data available	
Lower flammability limit	no data available	
Vapour pressure	18 mbar @ 20 °C	
Vapour density	0.6	
Specific Gravity	1.32	
Water Solubility	completely soluble	

Solubility in other solvents	no data available	No information available
Partition coefficient: n-octanol/water	no data available	No information available
Autoignition temperature	no data available	No information available
Decomposition temperature	no data available	No information available
Viscosity, kinematic	no data available	
Viscosity, dynamic	no data available	
Explosive properties	no data available	
Oxidizing properties	no data available	

9.2

Softening point	no data available
Molecular Weight	no data available
Density	no data available

Section 10: STABILITY AND REACTIVITY**10.1. Reactivity**

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal conditions.

Explosion Data

Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	None

10.3. Possibility of hazardous reactions

None under normal processing

Hazardous polymerisation does not occur

10.4. Conditions to avoid

Heat, flames and sparks. Do not freeze.

10.5

Strong oxidising agents. Strong acids. Strong bases. Contact with strong acids liberates sulphur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong bases liberates ammonia.

10.6

Nitrogen oxides (NOx) Sulphur oxides

Section 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Information on likely routes of exposure**

Inhalation	Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.
Eye contact	May cause slight irritation.
Skin contact	May cause skin irritation and/or dermatitis.

Ingestion

Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Information on toxicological effects**Symptoms**

No information available.

Numerical measures of toxicity**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	4,678.00 mg/kg
ATEmix (dermal)	10,363.00 mg/kg
ATEmix (inhalation-dust/mist)	0.04 mg/l
ATEmix (inhalation-vapour)	142.20 mg/l

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water	90,000 mg/kg (Rat)		
Ammonium thiosulfate	> 2000 mg/kg (Rat)		
Sodium sulfite	5680 mg/kg (Rat) Oral LD50 Rat 5680 mg/kg (Source: OECD SIDS)		22 mg/L (Rat) 1 h Inhalation LC50 Rat >22 mg/L 1 h (Source: IUCLID)
Sodium borate	2660 mg/kg (Rat) Oral LD50 Rat 2660 mg/kg (Source: JAPAN_GHS)	2000 mg/kg (Rabbit) Dermal LD50 Rabbit >2000 mg/kg (Source: IUCLID)	2 mg/m ³ (Rat) 4 h Inhalation LC50 Rat >2 mg/m ³ 4 h (Source: HSDB)

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitisation

No information available.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT - single exposure

Based on available data, the classification criteria are not met.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Section 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Ecotoxicity**

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Unknown aquatic toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic
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				invertebrates
Sodium sulfite	-	220 - 460: 96 h Leuciscus idus mg/L LC50 static		330: 24 h Psammechinus miliaris mg/L LC50
Sodium borate	158: 96 h Desmodesmus subspicatus mg/L EC50 2.6 - 21.8: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	340: 96 h Limanda limanda mg/L LC50		1085 - 1402: 48 h Daphnia magna mg/L LC50

12.2 Persistence and degradability

Expected to be readily biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation: .

Bioconcentration factor (BCF)

Chemical Name	log Pow
Sodium sulfite	-4

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

This information is provided to assist users in the correct disposal of working solutions prepared and used to Carestream Health specifications.

Working Solution

Waste material is currently classified as hazardous under Council Directive 91/689/EEC. The European Waste Catalogue Code is 09 01 04 Fixer solutions. Dispose according to the local regulations or guidelines that apply to the category of waste. Ensure the use of properly authorised waste management companies.

Waste from residues / unused products

Dispose of in accordance with local regulations.

Empty containers

If thoroughly cleaned, preferably by rinsing at least three times with small quantities of water, waste product packaging may be consigned for recovery or disposal as non hazardous waste. Whenever possible, minimize waste by using the rinsing water to make up the working solution. The European Waste Catalogue Code is 15 01 02 plastic packaging.

Contaminated packaging

Waste product packaging contaminated by residues of hazardous contents should be consigned for disposal as hazardous waste. In this case, the European Waste Catalogue Code is 15 01 10 packaging containing residues of or contaminated by dangerous substances.

Section 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 have 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.

IMDG/IMO

14.1. UN/ID no	Not regulated
14.2. Proper Shipping Name	Not regulated
14.3. Hazard class	Not regulated
14.4. Packing Group	Not regulated
14.5. Marine pollutant	None
14.6. Special Provisions	None

ADR/RID

14.1. UN/ID no	Not regulated
14.2. Proper Shipping Name	Not regulated
14.3. Hazard class	Not regulated
14.4. Packing Group	Not regulated
14.5. Environmental hazard	Not applicable
14.6. Special Provisions	None
Classification Code	None
Tunnel restriction code	(E)

ICAO/IATA

14.1. UN/ID no	Not regulated
14.2. Proper Shipping Name	Not regulated
14.3. Hazard class	None
14.4. Packing Group	Not regulated
14.5. Environmental hazard	Not applicable
14.6. Special Provisions	None
ERG Code	None

For transportation information, go to: <http://ship.carestream.com>

Section 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

AICS	Complies
DSL/NDL	Complies

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
NZIoC	Complies
PICCS	Complies
TSCA	Complies

Legend:**AICS** - Australian Inventory of Chemical Substances**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances**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**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**15.2 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture.

Section 16: OTHER INFORMATION**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H360FD - May damage fertility. May damage the unborn child

H314 - Causes severe skin burns and eye damage

H226 - Flammable liquid and vapour

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA: Time weighted average

STEL:

Short term exposure limit

Ceiling: Maximum limit value:

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Skin designation

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The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text