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: 5016308

Product name: CARESTREAM DENTAL X-ray Fixer

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

Identified uses: Restricted to professional users. Photographic chemical.
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.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

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.

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.

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

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/m³	TWA 1 mg/m³	TWA 2 mg/m³	-

1330-43-4		TWA 1 mg/m³	R1	STEL 6 mg/m³	
Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
Sodium borate 1330-43-4	-	TWA 2 mg/m³ STEL 6 mg/m³ C(A4)	-	-	TWA 1 mg/m³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Sodium borate 1330-43-4	-	STEL 0.8 mg/m³	-	TWA 1 mg/m³ STEL 2 mg/m³	TWA 1 mg/m³ STEL 3 mg/m³ 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

Property	Values	Remarks/ • Method
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 .

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

				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 Not regulated

14.1. UN/ID no	Not regulated
14.2. Proper Shipping Name	None
14.3. Hazard class	Not regulated
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/NDSL	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:	*	Skin designation

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Disclaimer
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