

## CARESTREAM DENTAL X-ray Fixer

Carestream Health, Inc.

Chemwatch Hazard Alert Code: 3

Part Number: 5060694

Issue Date: 11/07/2022

Version No: 1.1

Print Date: 04/05/2023

Safety data sheet according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

S.REACH.GB.EN

### SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### 1.1. Product Identifier

|                               |                               |
|-------------------------------|-------------------------------|
| Product name                  | CARESTREAM DENTAL X-ray Fixer |
| Chemical Name                 | Not Applicable                |
| Synonyms                      | Not Available                 |
| Chemical formula              | Not Applicable                |
| Other means of identification | Not Available                 |

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

|                          |   |
|--------------------------|---|
| Relevant identified uses | Photographic chemical<br>Restricted to professional users.<br>Use according to manufacturer's directions. |
| Uses advised against     | No specific uses advised against are identified.  |

#### 1.3. Details of the manufacturer or supplier of the safety data sheet

|                         |   |
|-------------------------|---|
| Registered company name | Carestream Health, Inc.                             |
| Address                 | 150 Verona Street Rochester, NY 14608 United States |
| Telephone               | 800-328-2910  |
| Fax                     | Not Available                                       |
| Website                 | www.carestream.com                                  |
| Email                   | WW-EHS@carestreamhealth.com                         |

#### 1.4. Emergency telephone number


|                                   |  |
|-----------------------------------|--|
| Association / Organisation        | CHEMTREC (North America)                 |
| Emergency telephone numbers       | +1-800-424-9300                          |
| Other emergency telephone numbers | CHEMTREC (International) +1-703-527-3887 |

### SECTION 2 Hazards identification

#### 2.1. Classification of the substance or mixture

|   |  |
|---|--|
| Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 [1] | H360FD - Reproductive Toxicity Category 1B   |
| Legend:   | 1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 |

#### 2.2. Label elements

|                     |   |
|---------------------|---|
| Hazard pictogram(s) |  |
| Signal word         | Danger  |

#### Hazard statement(s)

|        |  |
|--------|--|
| H360FD | May damage fertility. May damage the unborn child. |
|--------|--|

#### Supplementary Phrases

Not Applicable

## CARESTREAM DENTAL X-ray Fixer

### Precautionary statement(s) Prevention

|             |   |
|-------------|---|
| <b>P201</b> | Obtain special instructions before use.         |
| <b>P280</b> | Wear protective gloves and protective clothing. |

### Precautionary statement(s) Response

|                  |   |
|------------------|---|
| <b>P308+P313</b> | IF exposed or concerned: Get medical advice/ attention. |
|------------------|---|

### Precautionary statement(s) Storage

|             |                  |
|-------------|------------------|
| <b>P405</b> | Store locked up. |
|-------------|------------------|

### Precautionary statement(s) Disposal

|             |  |
|-------------|--|
| <b>P501</b> | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|-------------|--|

### 2.3. Other hazards

|                      |  |
|----------------------|--|
| <b>Sodium borate</b> | Listed in the European Chemicals Agency (ECHA) Candidate List of Substances of Very High Concern for Authorisation |
| <b>Sodium borate</b> | Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)                            |

## SECTION 3 Composition / information on ingredients

### 3.1. Substances

See 'Composition on ingredients' in Section 3.2

### 3.2. Mixtures

| 1.CAS No<br>2.EC No<br>3.Index No<br>4.REACH No                   | %[weight] | Name                        | Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 | SCL / M-Factor | Nanoform Particle Characteristics |
|---|-----------|-----------------------------|---|----------------|-----------------------------------|
| 1.7732-18-5*<br>2.231-791-2<br>3.Not Available<br>4.Not Available | 40-50     | <u>Water</u>                | Not Applicable  | Not Available  | Not Available                     |
| 1.7783-18-8*<br>2.231-982-0<br>3.Not Available<br>4.Not Available | 40-50     | <u>Ammonium thiosulfate</u> | Not Applicable  | 0              | Not Available                     |
| 1.1330-43-4*<br>2.215-540-4<br>3.005-011-00-4<br>4.Not Available  | 1-<3      | <u>Sodium borate</u>        | Reproductive Toxicity Category 1B; H360FD [1]                                 | 0              | Not Available                     |

**Legend:** 1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 3. Classification drawn from C&L; \* EU IOELVs available; [e] Substance identified as having endocrine disrupting properties

## SECTION 4 First aid measures

### 4.1. Description of first aid measures

|                     |  |
|---------------------|--|
| <b>Eye Contact</b>  | If this product comes in contact with eyes:<br><ul style="list-style-type: none"> <li>▶ Wash out immediately with water.</li> <li>▶ If irritation continues, seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul> |
| <b>Skin Contact</b> | If skin or hair contact occurs:<br><ul style="list-style-type: none"> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>   |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>  |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ Immediately give a glass of water.</li> <li>▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>  |

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

See Section 11

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

Treat symptomatically.

## SECTION 5 Firefighting measures

### 5.1. Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

### 5.2. Special hazards arising from the substrate or mixture

|                             |             |
|-----------------------------|-------------|
| <b>Fire Incompatibility</b> | None known. |
|-----------------------------|-------------|

### 5.3. Advice for firefighters

|                              |   |
|------------------------------|---|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> <li>▶ <b>DO NOT</b> approach containers suspected to be hot.</li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> <li>▶ Equipment should be thoroughly decontaminated after use.</li> </ul> |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ Non combustible.</li> <li>▶ Not considered a significant fire risk, however containers may burn.</li> </ul> <p>May emit poisonous fumes.</p>   |

## SECTION 6 Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

### 6.2. Environmental precautions

See section 12

### 6.3. Methods and material for containment and cleaning up

|                     |  |
|---------------------|--|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>▶ Wipe up.</li> <li>▶ Place in a suitable, labelled container for waste disposal.</li> </ul>   |
| <b>Major Spills</b> | <p>Moderate hazard.</p> <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Stop leak if safe to do so.</li> <li>▶ Contain spill with sand, earth or vermiculite.</li> <li>▶ Collect recoverable product into labelled containers for recycling.</li> <li>▶ Neutralise/decontaminate residue (see Section 13 for specific agent).</li> <li>▶ Collect solid residues and seal in labelled drums for disposal.</li> <li>▶ Wash area and prevent runoff into drains.</li> <li>▶ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.</li> <li>▶ If contamination of drains or waterways occurs, advise emergency services.</li> </ul> |

### 6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

|                                      |  |
|--------------------------------------|--|
| <b>Safe handling</b>                 | <ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ <b>DO NOT allow material to contact humans, exposed food or food utensils.</b></li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ <b>When handling, DO NOT eat, drink or smoke.</b></li> <li>▶ Keep containers securely sealed when not in use.</li> <li>▶ Avoid physical damage to containers.</li> <li>▶ Always wash hands with soap and water after handling.</li> <li>▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>▶ Use good occupational work practice.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul> |
| <b>Fire and explosion protection</b> | See section 5  |
| <b>Other information</b>             |  |

### 7.2. Conditions for safe storage, including any incompatibilities

|  |   |
|--|---|
| <b>Suitable container</b>  | <ul style="list-style-type: none"> <li>▶ Polyethylene or polypropylene container.</li> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul> |
| <b>Storage incompatibility</b>   | None known  |
| <b>Hazard categories in accordance with Regulation (EC) No 1272/2008</b> | Not Available   |

Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of

Not Available

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

| Ingredient           | DNELs<br>Exposure Pattern Worker   | PNECs<br>Compartment   |
|----------------------|--|--|
| Water                | Dermal 0.4 mg/kg bw/day (Systemic, Chronic)<br>Inhalation 0.544 mg/m <sup>3</sup> (Systemic, Chronic)<br>Dermal 5 mg/kg bw/day (Systemic, Acute)<br>Inhalation 8.8 mg/m <sup>3</sup> (Systemic, Acute)<br><i>Dermal 0.2 mg/kg bw/day (Systemic, Chronic) *</i><br><i>Inhalation 0.083 mg/m<sup>3</sup> (Systemic, Chronic) *</i><br><i>Oral 0.056 mg/kg bw/day (Systemic, Chronic) *</i><br><i>Dermal 2.5 mg/kg bw/day (Systemic, Acute) *</i><br><i>Inhalation 2.2 mg/m<sup>3</sup> (Systemic, Acute) *</i><br><i>Oral 2.5 mg/kg bw/day (Systemic, Acute) *</i> | Not Available  |
| Ammonium thiosulfate | Inhalation 350 mg/m <sup>3</sup> (Systemic, Chronic)<br><i>Inhalation 104 mg/m<sup>3</sup> (Systemic, Chronic) *</i><br><i>Oral 13 mg/kg bw/day (Systemic, Chronic) *</i>  | 0.78 mg/L (Water (Fresh))<br>0.078 mg/L (Water - Intermittent release)<br>100.1 mg/L (STP)   |
| Sodium borate        | Dermal 316.4 mg/kg bw/day (Systemic, Chronic)<br>Inhalation 6.7 mg/m <sup>3</sup> (Systemic, Chronic)<br><i>Dermal 159.5 mg/kg bw/day (Systemic, Chronic) *</i><br><i>Inhalation 3.4 mg/m<sup>3</sup> (Systemic, Chronic) *</i><br><i>Oral 0.79 mg/kg bw/day (Systemic, Chronic) *</i><br><i>Oral 0.79 mg/kg bw/day (Systemic, Acute) *</i>  | 2.9 mg/L (Water (Fresh))<br>2.9 mg/L (Water - Intermittent release)<br>13.7 mg/L (Water (Marine))<br>5.7 mg/kg soil dw (Soil)<br>10 mg/L (STP) |

\* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

| Source                               | Ingredient    | Material name                   | TWA     | STEL          | Peak          | Notes         |
|--------------------------------------|---------------|---------------------------------|---------|---------------|---------------|---------------|
| UK Workplace Exposure Limits (WELs). | Sodium borate | Disodium tetraborate, anhydrous | 1 mg/m3 | Not Available | Not Available | Not Available |

Emergency Limits


| Ingredient           | TEEL-1   | TEEL-2    | TEEL-3    |
|----------------------|----------|-----------|-----------|
| Ammonium thiosulfate | 12 mg/m3 | 130 mg/m3 | 790 mg/m3 |
| Sodium borate        | 6 mg/m3  | 88 mg/m3  | 530 mg/m3 |

| Ingredient           | Original IDLH | Revised IDLH  |
|----------------------|---------------|---------------|
| Water                | Not Available | Not Available |
| Ammonium thiosulfate | Not Available | Not Available |
| Sodium borate        | Not Available | Not Available |

8.2. Exposure controls

|  |   |                             |
|--|---|-----------------------------|
| 8.2.1. Appropriate engineering controls  | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.</p> |                             |
|  | Type of Contaminant:  | Air Speed:                  |
|  | solvent, vapours, degreasing etc., evaporating from tank (in still air)   | 0.25-0.5 m/s (50-100 f/min) |
|  | aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)   | 0.5-1 m/s (100-200 f/min.)  |
|  | direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)  | 1-2.5 m/s (200-500 f/min)   |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion). | 2.5-10 m/s (500-2000 f/min.)  |                             |

## CARESTREAM DENTAL X-ray Fixer

|   | <p>Within each range the appropriate value depends on:</p> <table border="1"> <thead> <tr> <th>Lower end of the range</th> <th>Upper end of the range</th> </tr> </thead> <tbody> <tr> <td>1: Room air currents minimal or favourable to capture</td> <td>1: Disturbing room air currents</td> </tr> <tr> <td>2: Contaminants of low toxicity or of nuisance value only</td> <td>2: Contaminants of high toxicity</td> </tr> <tr> <td>3: Intermittent, low production.</td> <td>3: High production, heavy use</td> </tr> <tr> <td>4: Large hood or large air mass in motion</td> <td>4: Small hood - local control only</td> </tr> </tbody> </table> <p>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.</p>  | Lower end of the range | Upper end of the range | 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents | 2: Contaminants of low toxicity or of nuisance value only | 2: Contaminants of high toxicity | 3: Intermittent, low production. | 3: High production, heavy use | 4: Large hood or large air mass in motion | 4: Small hood - local control only |
|---|---|------------------------|------------------------|---|---------------------------------|---|----------------------------------|----------------------------------|-------------------------------|---|------------------------------------|
| Lower end of the range  | Upper end of the range  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| 1: Room air currents minimal or favourable to capture                               | 1: Disturbing room air currents   |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| 2: Contaminants of low toxicity or of nuisance value only                           | 2: Contaminants of high toxicity  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| 3: Intermittent, low production.  | 3: High production, heavy use   |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| 4: Large hood or large air mass in motion   | 4: Small hood - local control only  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| <b>8.2.2. Individual protection measures, such as personal protective equipment</b> |    |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| <b>Eye and face protection</b>  | <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</li> </ul>  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| <b>Skin protection</b>  | See Hand protection below   |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| <b>Hands/feet protection</b>  | <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> <p>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> <li>· frequency and duration of contact,</li> <li>· chemical resistance of glove material,</li> <li>· glove thickness and</li> <li>· dexterity</li> </ul> <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> <li>· When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>· When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>· Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.</li> <li>· Contaminated gloves should be replaced.</li> </ul> <p>As defined in ASTM F-739-96 in any application, gloves are rated as:</p> <ul style="list-style-type: none"> <li>· Excellent when breakthrough time &gt; 480 min</li> <li>· Good when breakthrough time &gt; 20 min</li> <li>· Fair when breakthrough time &lt; 20 min</li> <li>· Poor when glove material degrades</li> </ul> <p>For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.</p> <p>It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.</p> <p>Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.</p> <p>Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:</p> <ul style="list-style-type: none"> <li>· Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.</li> <li>· Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential</li> </ul> <p>Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> <ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| <b>Body protection</b>  | See Other protection below  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |
| <b>Other protection</b>   | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C apron.</li> <li>▶ Barrier cream.</li> <li>▶ Skin cleansing cream.</li> <li>▶ Eye wash unit.</li> </ul>  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |

**8.2.3. Environmental exposure controls**

See section 12

**SECTION 9 Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

|   |               |  |               |
|---|---------------|--|---------------|
| <b>Appearance</b>                                   | Colourless    |  |               |
| <b>Physical state</b>                               | Liquid        | <b>Relative density (Water = 1)</b>            | 1.32          |
| <b>Odour</b>  | No Odour      | <b>Partition coefficient n-octanol / water</b> | Not Available |
| <b>Odour threshold</b>                              | Not Available | <b>Auto-ignition temperature (°C)</b>          | Not Available |
| <b>pH (as supplied)</b>                             | 4.9           | <b>Decomposition temperature (°C)</b>          | Not Available |
| <b>Melting point / freezing point (°C)</b>          | Not Available | <b>Viscosity (cSt)</b>                         | Not Available |
| <b>Initial boiling point and boiling range (°C)</b> | > 100         | <b>Molecular weight (g/mol)</b>                | Not Available |
| <b>Flash point (°C)</b>                             | Not Available | <b>Taste</b>                                   | Not Available |
| <b>Evaporation rate</b>                             | Not Available | <b>Explosive properties</b>                    | Not Available |
| <b>Flammability</b>                                 | Not Available | <b>Oxidising properties</b>                    | Not Available |
| <b>Upper Explosive Limit (%)</b>                    | Not Available | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Available |
| <b>Lower Explosive Limit (%)</b>                    | Not Available | <b>Volatile Component (%vol)</b>               | Not Available |
| <b>Vapour pressure (kPa)</b>                        | 1.80          | <b>Gas group</b>                               | Not Available |
| <b>Solubility in water</b>                          | Miscible      | <b>pH as a solution (1%)</b>                   | Not Available |
| <b>Vapour density (Air = 1)</b>                     | 0.6           | <b>VOC g/L</b>                                 | Not Available |
| <b>Nanoform Solubility</b>                          | Not Available | <b>Nanoform Particle Characteristics</b>       | Not Available |
| <b>Particle Size</b>                                | Not Available |  |               |

## 9.2. Other information

Not Available

## SECTION 10 Stability and reactivity

|   |  |
|---|--|
| <b>10.1.Reactivity</b>                          | See section 7.2  |
| <b>10.2. Chemical stability</b>                 | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| <b>10.3. Possibility of hazardous reactions</b> | See section 7.2  |
| <b>10.4. Conditions to avoid</b>                | See section 7.2  |
| <b>10.5. Incompatible materials</b>             | See section 7.2  |
| <b>10.6. Hazardous decomposition products</b>   | See section 5.3  |

## SECTION 11 Toxicological information

## 11.1. Information on toxicological effects

|                     |   |
|---------------------|---|
| <b>Inhaled</b>      | The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.   |
| <b>Ingestion</b>    | The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.  |
| <b>Skin Contact</b> | The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.<br>Open cuts, abraded or irritated skin should not be exposed to this material<br>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. |
| <b>Eye</b>          | Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).  |
| <b>Chronic</b>      | Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the material.   |

|                                      |  |                   |
|--------------------------------------|--|-------------------|
| <b>CARESTREAM DENTAL X-ray Fixer</b> | <b>TOXICITY</b>                              | <b>IRRITATION</b> |
|                                      | Not Available                                | Not Available     |
| <b>Water</b>                         | <b>TOXICITY</b>                              | <b>IRRITATION</b> |
|                                      | Oral (Rat) LD50: >90000 mg/kg <sup>[2]</sup> | Not Available     |

CARESTREAM DENTAL X-ray Fixer

|                      |   |  |
|----------------------|---|--|
| Ammonium thiosulfate | <b>TOXICITY</b>   | <b>IRRITATION</b>  |
|                      | Dermal (rabbit) LD50: >2000 mg/kg <sup>[1]</sup>  | Not Available  |
|                      | Inhalation(Rat) LC50: >2.6 mg/l4h <sup>[1]</sup>  |  |
|                      | Oral (Guinea) LD50; 1098 mg/kg <sup>[2]</sup>   |  |
| Sodium borate        | <b>TOXICITY</b>   | <b>IRRITATION</b>  |
|                      | Dermal (rabbit) LD50: >2000 mg/kg <sup>[2]</sup>  | Eye: adverse effect observed (irritating) <sup>[1]</sup>         |
|                      | Oral (Rat) LD50: 2403-4207 mg/kg <sup>[2]</sup>   | Skin: no adverse effect observed (not irritating) <sup>[1]</sup> |
| <b>Legend:</b>       | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances |  |

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity                    | ✗ | Carcinogenicity          | ✗ |
| Skin Irritation/Corrosion         | ✗ | Reproductivity           | ✓ |
| Serious Eye Damage/Irritation     | ✗ | STOT - Single Exposure   | ✗ |
| Respiratory or Skin sensitisation | ✗ | STOT - Repeated Exposure | ✗ |
| Mutagenicity                      | ✗ | Aspiration Hazard        | ✗ |

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
✓ – Data available to make classification

11.2 Information on other hazards

11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

12.1. Toxicity

| CARESTREAM DENTAL X-ray Fixer | Endpoint   | Test Duration (hr) | Species                       | Value         | Source        |
|-------------------------------|--|--------------------|-------------------------------|---------------|---------------|
|                               | Not Available  | Not Available      | Not Available                 | Not Available | Not Available |
| Water                         | Endpoint   | Test Duration (hr) | Species                       | Value         | Source        |
|                               | Not Available  | Not Available      | Not Available                 | Not Available | Not Available |
| Ammonium thiosulfate          | Endpoint   | Test Duration (hr) | Species                       | Value         | Source        |
|                               | NOEC(ECx)  | 504h               | Crustacea                     | >10mg/l       | 2             |
|                               | EC50   | 72h                | Algae or other aquatic plants | >100mg/l      | 2             |
|                               | EC50   | 48h                | Crustacea                     | 230mg/l       | 2             |
| Sodium borate                 | Endpoint   | Test Duration (hr) | Species                       | Value         | Source        |
|                               | LC50   | 96h                | Fish                          | 1900mg/l      | 4             |
|                               | EC50(ECx)  | 96h                | Algae or other aquatic plants | 2.6-21.8mg/l  | 4             |
|                               | EC50   | 96h                | Algae or other aquatic plants | 2.6-21.8mg/l  | 4             |
| <b>Legend:</b>                | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data |                    |                               |               |               |

**DO NOT** discharge into sewer or waterways.

12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|------------|-------------------------|------------------|
| Water      | LOW                     | LOW              |

12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation                       |
|------------|---------------------------------------|
|            | No Data available for all ingredients |

12.4. Mobility in soil

| Ingredient | Mobility                              |
|------------|---------------------------------------|
|            | No Data available for all ingredients |

**12.5. Results of PBT and vPvB assessment**

|                         | P             | B             | T             |
|-------------------------|---------------|---------------|---------------|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT                     | ✗             | ✗             | ✗             |
| vPvB                    | ✗             | ✗             | ✗             |
| PBT Criteria fulfilled? |               |               | No            |
| vPvB                    |               |               | No            |

**12.6. Endocrine disrupting properties**

No evidence of endocrine disrupting properties were found in the current literature.

**12.7. Other adverse effects**

No evidence of ozone depleting properties were found in the current literature.

**SECTION 13 Disposal considerations****13.1. Waste treatment methods**

|                                     |   |
|-------------------------------------|---|
| <b>Product / Packaging disposal</b> | <p>Recover silver before disposal. European Waste Catalogue EWC: 09 01 99 Wastes not otherwise specified.<br/>Dispose of in accordance with local regulations</p> <ul style="list-style-type: none"> <li>▸ Containers may still present a chemical hazard/ danger when empty.</li> <li>▸ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▸ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> </ul> <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.<br/>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>▸ Reduction</li> <li>▸ Reuse</li> <li>▸ Recycling</li> <li>▸ Disposal (if all else fails)</li> </ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p> <ul style="list-style-type: none"> <li>▸ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▸ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▸ Where in doubt contact the responsible authority.</li> <li>▸ Recycle wherever possible.</li> <li>▸ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.</li> <li>▸ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).</li> <li>▸ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.</li> </ul> |
|                                     | <b>Waste treatment options</b>  |
| <b>Sewage disposal options</b>      | Not Available   |

**SECTION 14 Transport information**

The dangerous goods information given below is based solely on the product formulation, and does not consider the product packaging configuration.

Depending on inner packaging quantities and packaging instructions, this product may meet specific regulatory exemptions or exclusions for the various modes of transport.

Please consult the product packaging for further details or go to the "Dangerous Goods Worksheets for Chemical Products" folder, located at: ship.carestream.com.

**Labels Required**

|                         |                |
|-------------------------|----------------|
| <b>Marine Pollutant</b> | NO             |
| <b>HAZCHEM</b>          | Not Applicable |

**Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

|   |                 |                |
|---|-----------------|----------------|
| 14.1. <b>UN number or ID number</b>     | Not Applicable  |                |
| 14.2. <b>UN proper shipping name</b>    | Not Applicable  |                |
| 14.3. <b>Transport hazard class(es)</b> | Class           | Not Applicable |
|   | Subsidiary risk | Not Applicable |
| 14.4. <b>Packing group</b>              | Not Applicable  |                |
| 14.5. <b>Environmental hazard</b>       | Not Applicable  |                |



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|                                    |                                |                |
|------------------------------------|--------------------------------|----------------|
| 14.6. Special precautions for user | Hazard identification (Kemler) | Not Applicable |
|                                    | Classification code            | Not Applicable |
|                                    | Hazard Label                   | Not Applicable |
|                                    | Special provisions             | Not Applicable |
|                                    | Limited quantity               | Not Applicable |
|                                    | Tunnel Restriction Code        | Not Applicable |

**Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

|                                    |   |                |
|------------------------------------|---|----------------|
| 14.1. UN number                    | Not Applicable  |                |
| 14.2. UN proper shipping name      | Not Applicable  |                |
| 14.3. Transport hazard class(es)   | ICAO/IATA Class   | Not Applicable |
|                                    | ICAO / IATA Subrisk                                       | Not Applicable |
|                                    | ERG Code  | Not Applicable |
| 14.4. Packing group                | Not Applicable  |                |
| 14.5. Environmental hazard         | Not Applicable  |                |
| 14.6. Special precautions for user | Special provisions  | Not Applicable |
|                                    | Cargo Only Packing Instructions                           | Not Applicable |
|                                    | Cargo Only Maximum Qty / Pack                             | Not Applicable |
|                                    | Passenger and Cargo Packing Instructions                  | Not Applicable |
|                                    | Passenger and Cargo Maximum Qty / Pack                    | Not Applicable |
|                                    | Passenger and Cargo Limited Quantity Packing Instructions | Not Applicable |
|                                    | Passenger and Cargo Limited Maximum Qty / Pack            | Not Applicable |

**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

|                                    |                    |                |
|------------------------------------|--------------------|----------------|
| 14.1. UN number                    | Not Applicable     |                |
| 14.2. UN proper shipping name      | Not Applicable     |                |
| 14.3. Transport hazard class(es)   | IMDG Class         | Not Applicable |
|                                    | IMDG Subrisk       | Not Applicable |
| 14.4. Packing group                | Not Applicable     |                |
| 14.5. Environmental hazard         | Not Applicable     |                |
| 14.6. Special precautions for user | EMS Number         | Not Applicable |
|                                    | Special provisions | Not Applicable |
|                                    | Limited Quantities | Not Applicable |

**Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

|                                    |                     |                |
|------------------------------------|---------------------|----------------|
| 14.1. UN number                    | Not Applicable      |                |
| 14.2. UN proper shipping name      | Not Applicable      |                |
| 14.3. Transport hazard class(es)   | Not Applicable      | Not Applicable |
| 14.4. Packing group                | Not Applicable      |                |
| 14.5. Environmental hazard         | Not Applicable      |                |
| 14.6. Special precautions for user | Classification code | Not Applicable |
|                                    | Special provisions  | Not Applicable |
|                                    | Limited quantity    | Not Applicable |
|                                    | Equipment required  | Not Applicable |
|                                    | Fire cones number   | Not Applicable |

**14.7. Maritime transport in bulk according to IMO instruments**

**14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

**14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code**

| Product name | Group         |
|--------------|---------------|
| Water        | Not Available |

| Product name         | Group         |
|----------------------|---------------|
| Ammonium thiosulfate | Not Available |
| Sodium borate        | Not Available |

#### 14.7.3. Transport in bulk in accordance with the IGC Code

| Product name         | Ship Type     |
|----------------------|---------------|
| Water                | Not Available |
| Ammonium thiosulfate | Not Available |
| Sodium borate        | Not Available |

## SECTION 15 Regulatory information

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

#### Water is found on the following regulatory lists

Not Applicable

#### Ammonium thiosulfate is found on the following regulatory lists

Not Applicable

#### Sodium borate is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

Great Britain GB Biocidal Active Substances

Great Britain GB mandatory classification and labelling (GB MCL) technical reports

Great Britain GB mandatory classification and labelling list (GB MCL)

UK REACH Candidate List of substances of very high concern (SVHC) for Authorisation

UK Workplace Exposure Limits (WELs).

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

### Information according to 2012/18/EU (Seveso III):

| Seveso Category | Not Available |
|-----------------|---------------|
|                 |               |

### 15.2. Chemical safety assessment

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

### ECHA SUMMARY

| Ingredient | CAS number | Index No      | ECHA Dossier  |
|------------|------------|---------------|---------------|
| Water      | 7732-18-5* | Not Available | Not Available |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s)                                     | Pictograms Signal Word Code(s) | Hazard Statement Code(s)           |
|-------------------------------|---|--------------------------------|------------------------------------|
| 1                             | Not Classified  | Not Available                  | Not Available                      |
| 2                             | Flam. Liq. 3; Acute Tox. 3; Skin Corr. 1A; Acute Tox. 2; Eye Irrit. 2 | GHS05; Dgr; GHS02; GHS06       | H318; H226; H314; H301; H411; H335 |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

| Ingredient           | CAS number | Index No      | ECHA Dossier  |
|----------------------|------------|---------------|---------------|
| Ammonium thiosulfate | 7783-18-8* | Not Available | Not Available |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|-------------------------------|-----------------------------------|--------------------------------|--------------------------|
| 1                             |                                   |                                |                          |
| 2                             | Eye Irrit. 2; Acute Tox. 4        | GHS07; Dgr                     | H319; H302               |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

| Ingredient    | CAS number | Index No     | ECHA Dossier  |
|---------------|------------|--------------|---------------|
| Sodium borate | 1330-43-4* | 005-011-00-4 | Not Available |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s)                | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|-------------------------------|--|--------------------------------|--------------------------|
| 1                             | Repr. 1B   | GHS08; Dgr                     | H360                     |
| 2                             | Acute Tox. 4; Eye Dam. 1; Acute Tox. 4; Repr. 1B | GHS08; Dgr                     | H360FD; H302; H318; H332 |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

### National Inventory Status

| National Inventory                             | Status  |
|--|---|
| Australia - AIC / Australia Non-Industrial Use | Yes   |
| Canada - DSL                                   | Yes   |
| Canada - NDLS                                  | No (Water; Ammonium thiosulfate; Sodium borate) |

## CARESTREAM DENTAL X-ray Fixer

| National Inventory            | Status |
|-------------------------------|--------|
| China - IECSC                 | Yes    |
| Europe - EINEC / ELINCS / NLP | Yes    |
| Japan - ENCS                  | Yes    |
| Korea - KECI                  | Yes    |
| New Zealand - NZIoC           | Yes    |
| Philippines - PICCS           | Yes    |
| USA - TSCA                    | Yes    |
| Taiwan - TCSI                 | Yes    |
| Mexico - INSQ                 | Yes    |
| Vietnam - NCI                 | Yes    |
| Russia - FBEPH                | Yes    |

**Legend:**  
Yes = All CAS declared ingredients are on the inventory  
No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

## SECTION 16 Other information

|               |            |
|---------------|------------|
| Revision Date | 11/07/2022 |
| Initial Date  | 29/03/2022 |

## Full text Risk and Hazard codes

|      |  |
|------|--|
| H226 | Flammable liquid and vapour.                     |
| H301 | Toxic if swallowed.                              |
| H302 | Harmful if swallowed.                            |
| H314 | Causes severe skin burns and eye damage.         |
| H318 | Causes serious eye damage.                       |
| H319 | Causes serious eye irritation.                   |
| H332 | Harmful if inhaled.                              |
| H335 | May cause respiratory irritation.                |
| H360 | May damage fertility or the unborn child.        |
| H411 | Toxic to aquatic life with long lasting effects. |

## Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

## Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average

PC—STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit.

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

AIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List

NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory

NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act

TCSI: Taiwan Chemical Substance Inventory

INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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