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

1.1. Product identifier

Product name: AHFil Silver Powder

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

Product Use: [SU22] Professional uses: Public domain (administration, education, entertainment, services, craftsmen); [SU20] Health services; [PC19] Intermediate; [PROC5] Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact);

Description: Dental repair material.

1.3. Details of the supplier of the safety data sheet

Company: Advanced Healthcare Ltd
Address: Units 2-4 Leavers Estate, Chiddingstone Causeway, Tonbridge, Kent, TN11 8JU, UK
Web: www.ahl.uk.com
Telephone: +44 (0) 1892 870500 (Use for Emergency also)
Fax: +44 (0)1892 870482
Email: sales@ahl.uk.com

1.4. Emergency telephone number

Emergency telephone number: +44(0)1892870500 (8.00 am - 4.30 pm Mon - Fri)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008

Eye Irrit. 2: H319;

2.2. Label elements

Hazard pictograms: !

Signal Word: Warning

Hazard Statement: Eye Irrit. 2: H319 - Causes serious eye irritation.

Precautionary Statement: Prevention

P264 - Wash thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
AHFil Silver Powder

2.2. Label elements

Precautionary Statement: Response
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

Other hazards
None.

Further information
Medical devices as defined in Directive 93/42/EEC and which are invasive or used in direct physical contact with the human body, are exempted from the provisions of regulation (EC) No 1272/2008 (CLP/GHS) usually if they are in the finished state and intended for the final user.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Index No.</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>REACH Registration Number</th>
<th>Conc. (%w/w)</th>
<th>Classification</th>
<th>M-factor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver (Silver, metallic)</td>
<td>7440-22-4</td>
<td>231-131-3</td>
<td>1 - 10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper (Copper fume)</td>
<td>7440-50-8</td>
<td></td>
<td>1 - 10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>236-675-5</td>
<td>1 - 10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(+) Tartaric Acid</td>
<td>87-69-4</td>
<td>201-766-0</td>
<td>1 - 10%</td>
<td>Xi; R36/37/38</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EC 1272/2008

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Index No.</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>REACH Registration Number</th>
<th>Conc. (%w/w)</th>
<th>Classification</th>
<th>M-factor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver (Silver, metallic)</td>
<td>7440-22-4</td>
<td>231-131-3</td>
<td>1 - 10%</td>
<td>Aquatic Acute 1: H400; Eye Irrit. 2: H319; STOT SE 3: H335;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tin</td>
<td></td>
<td></td>
<td>1 - 10%</td>
<td>Aquatic Chronic 1: H410; Eye Irrit. 2: H319; STOT SE 3: H335;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper (Copper fume)</td>
<td>7440-50-8</td>
<td></td>
<td>1 - 10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>236-675-5</td>
<td>1 - 10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(+) Tartaric Acid</td>
<td>87-69-4</td>
<td>201-766-0</td>
<td>1 - 10%</td>
<td>Skin Irrit. 2: H315; Eye Dam. 1: H318; Eye Irrit. 2: H319; STOT SE 3: H335;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Move the exposed person to fresh air.
Eye contact: Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.
Skin contact: Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.
Ingestion: DO NOT INDUCE VOMITING. Seek medical attention if irritation or symptoms persist.

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

Inhalation: May cause irritation to mucous membranes.
Eye contact: Causes serious eye irritation.
Skin contact: May cause irritation to skin.
Ingestion: May cause irritation to mucous membranes.

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

No data available.

SECTION 5: Firefighting measures
AHFil Silver Powder

5.1. Extinguishing media
Use extinguishing media appropriate to the surrounding fire conditions.

5.2. Special hazards arising from the substance or mixture
Burning produces irritating, toxic and obnoxious fumes.

5.3. Advice for firefighters
Wear suitable respiratory equipment when necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation of the working area.

6.2. Environmental precautions
Do not allow product to enter drains. Prevent further spillage if safe.

6.3. Methods and material for containment and cleaning up
Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.

6.4. Reference to other sections
SECTION 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and dispensing.

7.2. Conditions for safe storage, including any incompatibilities
Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers.

7.3. Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure Limit Values
### 8.1.1. Exposure Limit Values

<table>
<thead>
<tr>
<th>Substance</th>
<th>WEL 8-hr limit ppm:</th>
<th>WEL 8-hr limit mg/m³:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (Copper dusts and mists (as Cu))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 15 min limit ppm:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit mg/m³ total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>inhalable dust:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit mg/m³ total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>resolvable dust:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper (Copper fume)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit ppm:</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>WEL 15 min limit ppm:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit mg/m³ total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>inhalable dust:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit mg/m³ total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>resolvable dust:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silver (Silver, metallic)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit ppm:</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>WEL 15 min limit ppm:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit mg/m³ total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>inhalable dust:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit mg/m³ total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>resolvable dust:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit ppm:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 15 min limit ppm:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit mg/m³ total</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>inhalable dust:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 8-hr limit mg/m³ total</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>resolvable dust:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls
- Ensure adequate ventilation of the working area.

#### 8.2.2. Individual protection measures
- **Wear protective clothing.**
- **Eye / face protection**
  - Approved safety goggles.
- **Skin protection - Hand protection**
  - Chemical resistant gloves.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties
AHFil Silver Powder

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Colour</td>
<td>White/Grey</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Fat Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivity</td>
<td>No data available</td>
</tr>
<tr>
<td>Surface tension</td>
<td>No data available</td>
</tr>
<tr>
<td>Gas group</td>
<td>No data available</td>
</tr>
<tr>
<td>Benzene Content</td>
<td>No data available</td>
</tr>
<tr>
<td>Lead content</td>
<td>No data available</td>
</tr>
<tr>
<td>VOC (Volatile organic compounds)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data is available on this product.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects
AHFil Silver Powder

11.1. Information on toxicological effects

No data is available on this product.

11.1.4. Toxicological Information

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral Rat LD₅₀</th>
<th>Dermal Rabbit LD₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>300 mg/kg</td>
<td></td>
</tr>
<tr>
<td>L(+) Tartaric Acid</td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>Silver</td>
<td>&gt; 5000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Daphnia EC₅₀/48h</th>
<th>Algae IC₅₀/72h</th>
</tr>
</thead>
<tbody>
<tr>
<td>L(+) Tartaric Acid</td>
<td>93.1000 mg/l</td>
<td>51.4000 mg/l</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

No data is available on this product.

12.3. Bioaccumulative potential

No data is available on this product.

Partition coefficient

<table>
<thead>
<tr>
<th></th>
<th>AHFil Silver Powder</th>
<th>No data available</th>
</tr>
</thead>
</table>

12.4. Mobility in soil

No data is available on this product.

12.5. Results of PBT and vPvB assessment

No data is available on this product.

12.6. Other adverse effects

None.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of in compliance with all local and national regulations.

Disposal methods

For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Disposal of packaging

Do NOT reuse empty containers. Empty containers can be sent for disposal or recycling.

SECTION 14: Transport information

14.1. UN number

The product is not classified as dangerous for carriage.

14.2. UN proper shipping name

The product is not classified as dangerous for carriage.

14.3. Transport hazard class(es)

The product is not classified as dangerous for carriage.

14.4. Packing group

The product is not classified as dangerous for carriage.

14.5. Environmental hazards
AHFII Silver Powder

14.5. Environmental hazards

The product is not classified as dangerous for carriage.

14.6. Special precautions for user

The product is not classified as dangerous for carriage.

No data is available on this product.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

The product is not classified as dangerous for carriage.

No data is available on this product.

SECTION 15: Regulatory information

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

No data available.

15.2. Chemical safety assessment

No data is available on this product.

SECTION 16: Other information

This document differs from the previous version in the following areas:

2 - Hazard pictograms.
2 - Signal Word.
2 - Precautionary Statement: Prevention.
2 - Precautionary Statement: Response.
4 - Eye contact.
8 - Skin protection - Handprotection.
8 - Eye / face protection.
9 - 9.1. Information on basic physical and chemical properties (PH).
9 - 9.1. Information on basic physical and chemical properties (Initial boiling point).
9 - 9.1. Information on basic physical and chemical properties (Melting point).
9 - 9.1. Information on basic physical and chemical properties (Flash point).
9 - 9.1. Information on basic physical and chemical properties (Flammability (solid, gas)).
9 - 9.1. Information on basic physical and chemical properties (Autoignition temperature).
9 - 9.1. Information on basic physical and chemical properties (Explosive properties).
9 - 9.1. Information on basic physical and chemical properties (Oxidising properties).
9 - 9.1. Information on basic physical and chemical properties (Vapour pressure).
9 - 9.1. Information on basic physical and chemical properties (Relative density).
9 - 9.1. Information on basic physical and chemical properties (Viscosity).
9 - 9.1. Information on basic physical and chemical properties (Vapour density).
9 - 9.1. Information on basic physical and chemical properties (Evaporation rate).
9 - 9.1. Information on basic physical and chemical properties (Freezing Point).
9 - 9.1. Information on basic physical and chemical properties (Fat Solubility).
9 - 9.1. Information on basic physical and chemical properties (Solubility).
9 - 9.1. Information on basic physical and chemical properties (Odour threshold).
9 - 9.2. Other information (Conductivity).
9 - 9.2. Other information (Partition coefficient).
9 - 9.2. Other information (Gas group).
9 - 9.2. Other information (Surface tension).
9 - 9.2. Other information (Benzene Content).
9 - 9.2. Other information (Product Subcategory).
9 - 9.2. Other information (Lead content).
11 - 11.1.4. Toxicological Information.
12 - 12.1. Toxicity.
16 - Maximum content of VOC.
### Other information

<table>
<thead>
<tr>
<th>Text of risk phrases in Section 3</th>
<th>R36/37/38 - Irritating to eyes, respiratory system and skin.</th>
</tr>
</thead>
</table>
| Text of Hazard Statements in Section 3 | Aquatic Acute 1: H400 - Very toxic to aquatic life.  
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.  
Eye Irrit. 2: H319 - Causes serious eye irritation.  
STOT SE 3: H335 - May cause respiratory irritation.  
Skin Irrit. 2: H315 - Causes skin irritation.  
Eye Dam. 1: H318 - Causes serious eye damage. |

### Further information

The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This 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 other process.