Fusio™ Liquid Dentin

1. Identification of the material and supplier

Names

Product name: Fusio™ Liquid Dentin
ADG: Not regulated.
Manufacturer: Pentron Clinical
1717 West Collins Avenue
Orange, CA 92867-5422
Telephone no.: 1-203-265-7397, Toll Free: 1-800-551-0283

Emergency telephone number:
CHEMTREC® (24 hours) U.S.: 1-800-424-9300
International: +1-703-527-3887

Uses

Area of application: Professional applications.
Material uses: Dental product
Product type: Liquid.

2. Hazards identification

Classification: Not regulated.
Risk phrases: Not classified.
Statement of hazardous/dangerous nature: NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

3. Composition/information on ingredients

Mixture: Yes.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>glass, oxide, chemicals</td>
<td>65997-17-3</td>
<td>&gt; 60</td>
</tr>
</tbody>
</table>

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First-aid measures

First-aid measures

Inhalation: No special measures required. If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion: Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Get medical attention if adverse health effects persist or are severe.
Skin contact: No special measures required. In case of contact, immediately flush skin with plenty of water. Get medical attention if symptoms occur.
Eye contact: No special measures are required. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.
Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training.
Advice to doctor: Treat symptomatically.
5. Fire-fighting measures

Extinguishing media

Suitable: In case of fire, use water, dry chemical powder or carbon dioxide.

Not suitable: Do not use water jet.

Special exposure hazards: In case of major fire and large quantities: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- nitrogen oxides
- metal oxide/oxides

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions: Low release. For professional use only. Handling of product in very small amounts or in situations where release is highly unlikely.

Environmental precautions: Low release. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill: Small Quantity. For professional use only. Absorb with an inert material and place in an appropriate waste disposal container.

Large spill: Small Quantity. For professional use only. Absorb with an inert material and place in an appropriate waste disposal container.

7. Handling and storage

Handling: No special measures are required for small quantities under normal and intended conditions of product use. For professional use only. Put on appropriate personal protective equipment (see Section 8). Handle with care and dispose of in a safe manner.

Storage: Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use.

Combustible liquid: Not applicable.

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>glass, oxide, chemicals</td>
<td>ACGIH TLV (United States, 6/2013). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction TWA: 1 f/cc 8 hours. Form: Respirable fibers: length greater than 5 μM; aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination.</td>
</tr>
</tbody>
</table>
Fusio™ Liquid Dentin

8. Exposure controls/personal protection

**Recommended monitoring procedures**
If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Exposure controls**

<table>
<thead>
<tr>
<th>Engineering measures</th>
<th>No special measures are required for small quantities under normal and intended conditions of product use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hygiene measures</td>
<td>No special measures are required for small quantities under normal and intended conditions of product use.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.</td>
</tr>
<tr>
<td>Hands</td>
<td>Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.</td>
</tr>
<tr>
<td>Respiratory</td>
<td>No special measures are required for small quantities under normal and intended conditions of product use.</td>
</tr>
<tr>
<td>Skin</td>
<td>Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.</td>
</tr>
</tbody>
</table>

**Environmental exposure controls**
No special measures are required for small quantities under normal and intended conditions of product use.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid. [Paste.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Various</td>
</tr>
<tr>
<td>Odour</td>
<td>Fruity./Ester.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>~1.8</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammable limits</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>3 to 4</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Very slightly soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Physical/chemical properties comments</td>
<td>Content (%) (solids): &gt;=65</td>
</tr>
</tbody>
</table>
Fusio™ Liquid Dentin

10. Stability and reactivity

Chemical stability: The product is stable.
Possibility of hazardous reactions:
Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur. Long term: Polymerisation.

Conditions to avoid: Protect from sunlight. Initiators. Avoid excessive heat.
Materials to avoid:
Reactive or incompatible with the following materials: oxidizing materials and reducing materials.
Peroxide.

Hazardous decomposition products:
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Potential acute health effects
Inhalation: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Eye contact: No known significant effects or critical hazards.

Acute toxicity
Conclusion/Summary: Not available.

Potential chronic health effects
Chronic toxicity
Conclusion/Summary: Not available.

Irritation/Corrosion
Conclusion/Summary: Not available.

Sensitiser
Skin: Kligman score: Grade I (weak sensitizer)

Carcinogenicity
Conclusion/Summary: Not available.

Mutagenicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Experiment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fusio™ Liquid Dentin</td>
<td>471 Bacterial Reverse Mutation Test</td>
<td>Subject: Bacteria</td>
<td>Negative</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Not available.

Teratogenicity
Conclusion/Summary: Not available.

Reproductive toxicity
Conclusion/Summary: Not available.

Chronic effects: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Australia
11. Toxicological information

Inhalation: No specific data.
Ingestion: No specific data.
Skin: No specific data.
Eyes: No specific data.
Target organs: Contains material which causes damage to the following organs: upper respiratory tract, skin. Contains material which may cause damage to the following organs: eye, lens or cornea.

12. Ecological information

Ecotoxicity: No known significant effects or critical hazards.
Aquatic ecotoxicity:
Conclusion/Summary: Not available.
Other ecological information:
Persistence/degradability:
Conclusion/Summary: Not available.
Other adverse effects: No known significant effects or critical hazards.

13. Disposal considerations

Methods of disposal: This material and its container must be disposed of in a safe way.

14. Transport information

International transport regulations:
ADG/ADR/IMDG/IATA: Not regulated.

15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons:
Not regulated.
Control of Scheduled Carcinogenic Substances:
Australia inventory (AICS): Not determined.
EU Classification: Not classified.

16. Other information

Person who prepared the MSDS: IHS
Date of previous issue: No previous validation.
Date of issue/ Date of revision: 4/16/2014.
Version: 1

Disclaimer: Indicates information that has changed from previously issued version.
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.