This SDS packet was issued with item:
075890819

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

070447458 070447466 070447474 070447482 070447490 070447508 070451393 070451401 070451419 075890710
075890728 075890736 075890744 075890777 075890785 075890793 075890801 075890843 075890850 075890868
075890876
1.0 Commercial Product Name and Supplier

1.1 Commercial product name

ACTIVA BioACTIVE-BASE / LINER
ACTIVA BioACTIVE-RESTORATIVE

1.2 Application / Use

Dental material for use by dental professional only.

1.2.2 SIC

851 Human health activity

1.3 Manufacturer, Importer

Pulpdent Corporation
80 Oakland Street
P.O. Box 780
Watertown, MA 02472 USA

Telephone: 1 617 926-6666
Fax: 1 617 926-6262
Email: Pulpdent@pulpdent.com

1.4 Emergency Telephone Number

1-800-535-5053 (24 Hour / USA)

1.5 Authorized European Representative

International Business Solutions Ltd.
54 Mayfield Ridge
Hatch Warren, Basingstoke, RG22 4RS UK

Tel: 07989 407479 / Fax: 01256 350330
Email: s.williams5@btconnect.co.uk

2.0 Hazards Identification

2.1 Classification

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Hazard Category</th>
<th>Hazard Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye irritation</td>
<td>2</td>
<td>H319</td>
</tr>
<tr>
<td>STOT SE</td>
<td>3</td>
<td>H335</td>
</tr>
<tr>
<td>Skin irritation</td>
<td>2</td>
<td>H315</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>1</td>
<td>H317</td>
</tr>
</tbody>
</table>

2.1.2 Classification according to Directive 67/548/EEC

Irritant; Xi; R 36/37/38 - 43

(See SECTION 16 for full text of risk phrases)

2.2 GHS Label Elements

Signal Word: WARNING

Restricted to use by dental professional only.

Hazard Statements

H319: Eye irritation. 2. May cause eye irritation.
H335: STOT SE. 3. May cause respiratory irritation.
H315: Skin irritation. 2. May cause skin irritation.
H317: Sensitization. 1. May cause an allergic skin reaction.

Precautionary Statements

P261: Avoid breathing vapor.
P280: Wear protective gloves and eye protection
P305+P351: If in eyes, rinse cautiously with water for several minutes.
P337+P313: If eye irritation persists, get medical advice/attention.
Pulpdent Corporation  Revision Date: November 1, 2013

Safety Data Sheet

Trade Name: **ACTIVA BioACTIVE PRODUCTS**

P302+P352: If on skin, wash with plenty of soap and water.
P333+P313: If irritation or rash occurs, get medical advice/attention.
P410+P411: Protect from sunlight. Store at temperature not exceeding 27°C / 80°F.

### 3.0 Composition

#### 3.1 Chemical characterization of the preparation:
Resin-modified glass ionomer dental material

#### 3.2 Hazardous ingredients

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Name of the Ingredient</th>
<th>Concentration BASE/LINER</th>
<th>Concentration RESTORATIVE</th>
<th>Classification per 67/548/EEC</th>
<th>Classification per Regulation (EC) No.1278/2008 (CLP).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary</td>
<td>Blend of diurethane and other methacrylates with modified polyacrylic acid</td>
<td>53.2%</td>
<td>44.6%</td>
<td>Irritant; Xi R 3637/38 - 43</td>
<td>Eye irritation, 2, H319</td>
</tr>
<tr>
<td>112945-52-5</td>
<td>Silica, amorphous</td>
<td>3.0%</td>
<td>6.7%</td>
<td>Irritant; Xi, R 36/37/38</td>
<td>Eye irritation, 2, H319</td>
</tr>
<tr>
<td>7681-49-4</td>
<td>Sodium fluoride</td>
<td>0.90%</td>
<td>0.75%</td>
<td>Harmful (Xn); R22-36/38</td>
<td>Acute toxicity, 4, H302</td>
</tr>
</tbody>
</table>

### 4.0 First Aid Measures

#### 4.1 General Information
May be irritating to eyes, respiratory system and skin. Avoid contact with eyes and skin. Do not inhale vapors. May cause sensitization by skin contact. Show this safety data sheet to medical personnel. Get medical attention in case of uncertainty.

#### 4.2 Inhalation
Move to fresh air. Administer oxygen/CPR as needed. Seek medical attention.

#### 4.3 Skin Contact
Take off contaminated clothing. Wash skin thoroughly with soap and water.

#### 4.4 Eye Contact
Keep eyelids apart; flush with running water for 15+ minutes. Get medical attention.

#### 4.5 Ingestion
Rinse mouth with water. Do not induce vomiting. Get immediate medical attention. May be irritating to mucous membranes. Never give anything by mouth to an unconscious person.

#### 4.6 Precautions for first responders
Ventilate the area. Wear eye and skin protection.

#### 4.7 Information for physicians
Symptoms: Irritation or redness in eyes, throat or on skin.
Hazards: May be irritating to eyes, respiratory system, skin. May be sensitizing by skin contact.
Treatment: As above under First Aid.

### 5.0 Fire Fighting Measures

#### 5.1 Suitable extinguishing media
Carbon dioxide, dry chemical, alcohol foam, or water fog. Water spray may be used to keep fire exposed containers cool.

#### 5.2 Extinguishing media to avoid
Do not use direct water stream

#### 5.3 Special exposure hazards in a fire
Heat may cause polymerization with rapid release of energy.

#### 5.4 Special protective equipment for fire-fighters
A self-contained breathing apparatus should be worn by firefighting personnel. Cool exposed containers with water spray to prevent polymerization under fire conditions.

### 6.0 Accidental Release Measures

#### 6.1 Personal precautions.
Wear safety glasses, gloves and lab coat.
### Environmental precautions
Avoid releasing large amounts of uncured material into the environment. Cured / set-up material is, to our knowledge, inert.

### Method for clean up
Contain spilled material. Absorb or wipe up spill with suitable material (e.g. paper towels). Collect for disposal in a covered container. Wash area of spill with alcohol or soap and water.

### Handling and Storage

#### Handling
For use only by dental professionals. Practice good hygiene. Avoid direct/strong light sources, extremes of temperature (>27°C/80°F, <5°C/40°F), contamination, cross contamination of two-part materials. Recap immediately after use.

#### Storage
Keep container tightly closed. Store in original container at cool room temperature (<25°C). Avoid direct/strong light, sources of ignition, extremes of temperature. Shelf life for properly stored, unopened product is two years from date of manufacture.

#### Specific uses
Dental base/liner, cement or restorative

### Exposure Controls / Personal Protection

#### Exposure limit values
PEL: Not established. TLV: Not established.

#### Exposure controls
No special equipment required under normal conditions of use.

- **Respiratory protection**: None required. Good general ventilation is sufficient to control any airborne vapors.
- **Hand protection**: No special requirements other than the usual surgical gloves.
- **Eye protection**: No special requirements other than the usual safety glasses worn by dental staff.
- **Skin protection**: No special requirements. Good personal hygiene, safety practices and wearing a lab coat should protect dental staff from unnecessary exposure to uncured material.

#### Environmental exposure controls
Cure material before disposing.

### Physical and Chemical Properties

#### Appearance / Color

<table>
<thead>
<tr>
<th>Part</th>
<th>Base / Liner</th>
<th>Restorative</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Two pastes:</td>
<td>Two thick pastes</td>
</tr>
<tr>
<td></td>
<td>Yellowish</td>
<td>Tooth-colored</td>
</tr>
<tr>
<td>B</td>
<td>Off-white</td>
<td>Off-white</td>
</tr>
</tbody>
</table>

- **Odor**: Faint, characteristic

- **pH**: Not determined
- **Boiling point**: Not determined
- **Flash point**: Not determined
- **Flammability (solid, gas)**: Not applicable
- **Explosive properties**: Not applicable
- **Oxidizing properties**: Not determined
- **Vapor pressure**: < 1 mm Hg

#### Specific gravity

<table>
<thead>
<tr>
<th>Part</th>
<th>Base / Liner</th>
<th>Part B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.460 g/mL</td>
<td>1.380 g/mL</td>
</tr>
</tbody>
</table>
Trade Name: **ACTIVA BioACTIVE PRODUCTS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Property</th>
<th>1.580 g/mL</th>
<th>1.620 g/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2.9</td>
<td>Solubility in water</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>9.2.10</td>
<td>Partition coefficient</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>9.2.11</td>
<td>Viscosity</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>9.2.12</td>
<td>Vapor density</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>9.2.13</td>
<td>Evaporation rate</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

### 10.0 Stability and reactivity

#### 10.1 Conditions to avoid
Temperature > 38°C, intense light, cross-contamination.

#### 10.2 Materials to avoid
Reducing and oxidizing agents, peroxides, amines.

#### 10.3 Hazardous decomposition products
Under fire conditions, amounts greater than that supplied in this product may polymerize with heat build-up, release of oxides of carbon and nitrogen.

#### 10.4 Further information
Stable material if stored and used as directed. Polymerization will occur when light-cured material is exposed to direct light.

### 11.0 Toxicological information

#### 11.1 Acute toxicity
Finished products in paste form present a minimal health hazard under normal conditions of use and in the quantities necessary for dental procedures.

- Sodium fluoride: Oral rat LD$_{50}$: 180 mg/kg
- Silica, amorphous: Oral rat LD$_{50}$: 3160 mg/kg

#### 11.2 Irritation and corrosiveness
May be irritating to eyes, respiratory tract, mucous membranes or skin on contact or with prolonged exposure.

#### 11.3 Sensitization
May be sensitizing. Prolonged or frequent skin contact may cause allergic skin reactions in some susceptible individuals.

#### 11.4 Sub-acute, sub-chronic and prolonged toxicity
Prolonged and/or frequent skin contact may cause allergic skin reactions in susceptible individuals. Prolonged exposure to large amounts (more than in this product) may cause eye and respiratory irritation.

#### 11.5 Carcinogenicity, Mutagenicity, Reproductive Toxicity
None known

#### 11.6 Empirical data
Biocompatibility has been tested and found to be acceptable.

#### 11.7 Clinical experience
ACTIVA BioACTIVE PRODUCTS are new products that have been evaluated by dentist consultants. There have been no reports of adverse events.

### 12.0 Ecological Information

#### 12.1 Ecotoxicity
Avoid release of uncured material into the environment. To the best of our knowledge, polymerized material is inert. No other information is available. Follow all government regulations.

### 13.0 Disposal Considerations

#### 13.1 Regulations
Follow all local and national government regulations in disposing material or contaminated packaging.

### 14.0 Transport Information

#### 14.1 Restrictions
None. Not regulated.
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>15.0</strong> Regulatory Information</td>
<td></td>
</tr>
<tr>
<td>15.1 EU</td>
<td>Class IIA medical devices under MDD 93/42/EEC.</td>
</tr>
<tr>
<td>15.2 US FDA</td>
<td>Class II medical devices.</td>
</tr>
<tr>
<td>15.3 Health Canada</td>
<td>Class III medical devices</td>
</tr>
<tr>
<td><strong>16.0</strong> Other information</td>
<td></td>
</tr>
<tr>
<td>16.1 List of relevant R phrases</td>
<td>R36/37/38: Irritating to eyes, respiratory system and skin. R43: Sensitizing by skin contact.</td>
</tr>
<tr>
<td>16.4 Restrictions on use</td>
<td>ACTIVA BioACTIVE PRODUCTS are to be sold to and used by dental professionals only.</td>
</tr>
<tr>
<td>16.5 Further information</td>
<td>The information presented herein is believed to be factual as it has been derived from the works of persons believed to be qualified experts. However, nothing contained in this information is to be taken as a warranty or representation for which Pulpdent Corporation bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.</td>
</tr>
<tr>
<td>16.7 Information which has been added, deleted or revised.</td>
<td>This Safety Data Sheet has been revised to meet the requirements of the GHS SDS format, Regulations (EC) No. 1272/2008 (CLP) and (EC) No. 1907/2006 (REACH). Specifically, Sections 2.1, 2.2, 3.2, 16.2, 16.3 have been modified.</td>
</tr>
</tbody>
</table>