**PHYSICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Test</th>
<th>Beautifil II</th>
<th>Beautifil II LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressive Strength (MPa)</td>
<td>330</td>
<td>361</td>
</tr>
<tr>
<td>Tensile Strength (MPa)</td>
<td>130</td>
<td>117</td>
</tr>
<tr>
<td>Tensile Hardness (P.s.)</td>
<td>92</td>
<td>96</td>
</tr>
<tr>
<td>Enamel Tensile Strength (MPa)</td>
<td>5.46</td>
<td>5.46</td>
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<tr>
<td>Flexural Strength (MPa)</td>
<td>83</td>
<td>83</td>
</tr>
<tr>
<td>Tensile Modulus (GPa)</td>
<td>3-4 Almm</td>
<td>2.0 Almm (dentin 1Almm)</td>
</tr>
<tr>
<td>Fracture Tensile &amp; Recharge</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Physical Properties Graph**

- **Polishability & Luster [Gloss Units]**
  - 15 sec polishing
  - 30 sec polishing

**Comparison Chart**

Beautifil II

- **Light Transmissivity**
  - A1 1401
  - A2 1402
  - A3 1403
  - A3.5 1404
  - A4 1405
  - B1 1408
  - B2 1409
  - B3 1410
  - C2 1412

Beautifil II LS

- **Light Transmissivity**
  - A1 1751
  - A2 1752
  - A3 1753
  - A3.5 1754
  - A4 1755
  - B1 1758
  - B2 1759
  - B3 1760
  - C2 1761

**Shade Item No.**

- **A1**
  - Y2270
  - Y2284
- **A2**
  - Y2271
  - Y2285
- **A3**
  - Y2272
  - Y2286
- **A3.5**
  - Y2273
  - Y2287
- **A4**
  - Y2274
  - Y2288
- **B1**
  - Y2275
  - Y2289
- **B2**
  - Y2276
  - Y2290
- **B3**
  - Y2277
  - Y2291
- **C2**
  - Y2278
  - Y2292
- **A2O**
  - Y2280
  - Y2294
- **A3O**
  - Y2281
  - Y2295
- **Incisal**
  - Y2282
  - Y2296
- **Bleach White**
  - Y2283
  - Y2297

- **Shade Item No.**
  - **Gingiva**
    - Syringe 2g (Item No. 1360)
    - Tips 0.25g x 20 tips (Item No. 1361)
  - **Enamel**
    - Syringe 2g (Item No. 1362)
    - Tips 0.25g x 20 tips (Item No. 1361)

- **Beautifil Opaquers**
  - 2g (Item No. 1363)
  - 2g (Item No. 1364)

- **BeautiBond**
  - Unit Dose (50) 0.1mL unit doses, 50 microbrushes (Item No. 1782)
  - Bottle 6mL, 50 microbrushes (Item No. 1781)

Ideal with BeautiBond®
Create indistinguishable restorations with optical characteristics of natural teeth. The Beautifil II fiber structure has been developed to simulate the internal structure of natural teeth with ideal light transmission and optical characteristics. The moderate translucency and light transmission of enamel combined with the light-diffusion of dentin offers predictable aesthetics with a close shade match to natural teeth.

Beautifil II has excellent versatility with natural shade reproduction that can be achieved with a chameleon effect, using a single shade that blends well with surrounding teeth making the restoration indistinguishable. In aesthetically demanding cases additional shades can be used to achieve exceptional results.

- Clinically proven in 6- and 13-year clinical studies
- Superior handling – easy sculpting without slumping or sticking
- Completely and accurately make margins
- High fiber load and high flexural strength ensure long-term stability
- Sustained fluoride release and recharge
- Anti-plaque effect minimizes plaque adhesion, inhibiting bacterial colonization and plaque accumulation
- Ideal light transmission
- Natural fluorescence
- Optimal characteristic with a chameleon effect: the natural dentition
- High level of esthetics

Despite multiple advances in dental material science (most of the current composites on the market shrink about 2% to 5%), some composites and the resultant stress continue to challenge all clinicians. The unrelieved stress can weaken the bond between the tooth structure and the restoration, eventually producing a gap at the restoration margins. It can also lead to the formation of secondary caries and post-operative sensitivity, resulting in the debonding. Indicated for all classes of restorations, Beautifil II LS (Low Shrink) has been formulated to minimize polymerization shrinkage and resultant shrinkage stress. With superior biocompatibility and aesthetics, combined with low polymerization shrinkage and shrinkage stress, Beautifil II LS delivers predictable clinical efficacy and maximum performance characteristics. Credited for these outstanding results are a new proprietary monomer and high-density pre-polymerized fillers which also exhibit tooth-like optical properties and natural aesthetics.

Beautifil II LS incorporates a proprietary Giomer chemistry which facilitates release and recharge of fluoride, strontium and other beneficial ions providing the ability to inhibit plaque formation and establish a stable pH in the oral environment, decreasing the risk for secondary caries. and other beneficial ions providing the ability to inhibit

---

**Giomer**

- Reduction in tooth mineral solubility
- An anti-plaque effect
- Formation of an acid-resistant layer
- Decrease in acid production of cariogenic bacteria

**Filling**

- Great strength and high wear resistance
- Polishes in an instant

**Durability**

- Tooth-like aesthetics with natural fluorescence and chameleon effect
- Natural light transmission and diffusion
- Sustainable fluoride release and recharge with bioactive Giomer Technology

---

**Filtek Supreme Ultra**

- Low volumetric shrinkage (0.03%) and shrinkage stress (0.72 MPa)

---

**Filtek LS**

- Great strength and high wear resistance
- Polishes in an instant

---

**Polymerization Shrinkage Stress (MPa)**

---

**Polymerization Shrinkage (%)**
Create indistinguishable restorations with optical characteristics of natural teeth. The Beautifil II fiber structure has been developed to simulate the internal structure of natural teeth with ideal light transmission and optical characteristics. The moderate translucency and light transmission of enamel combined with the light-diffusion of dentin offers predictable aesthetics with a close shade match to natural teeth.

Beautifil II has excellent versatility with natural shade reproduction that can be achieved with a chameleon effect, using a single shade that blends well with surrounding teeth making the restoration undetectable. In aesthetically demanding cases additional shades can be used to achieve exceptional results.

- Clinically proven in 6- and 12-year clinical studies
- Excellent physical properties

Despite multiple advances in dental material science (most of the current competitive on the market shrink about 2% to 5%), volumetric shrinkage and the resultant stress continue to challenge all clinicians. The unrelieved stress can weaken the bond between the tooth structure and the restoration, eventually producing a gap at the restoration margins. It can also lead to the formation of secondary caries and post-operative sensitivity, resulting in the debonding.

Beautifil II LS incorporates a proprietary Giomer chemistry which facilitates release and recharge of fluoride, strontium and other beneficial ions providing the ability to inhibit plaque formation and establish a stable pH in the oral environment, decreasing the risk for secondary caries.

**Beautifil II LS**

- Sustainable fluoride release and recharge with bioactive Giomer Technology
- GIOMER technology: results at 8 years. JAM Dent. Assoc. 2007;138:621-627
- Fluoride release & recharge from GIOMER
- Fluoride in Mouth
- Fluoride in GIOMER
- Anti-plaque affect minimizes plaque
- Sustained fluoride release and recharge
- High filler load and high flexural strength
- Superior handling – easy sculpting without slumping or sticking
- High fiber load and high flexural strength ensure long-term stability
- Sustained fluoride release and recharge
- Anti-plaque effect minimizes plaque adhesion, inhibits bacterial colonization and plaque accumulation
- Ideal light transmission
- Natural fluorescence
- Optical characteristics with a chameleon effect
- High level of aesthetically
- Create indistinguishable restorations with optical characteristics of natural teeth
- Beautifil II with SPR-G

**Beautifil II PINK & WHITE**

Great strength and high wear resistance

Polishes in an instant

Tooth-like aesthetics with natural fluorescence and chameleon effect

Natural light transmission and diffusion

Stable fluoride release and recharge with bioactive Giomer Technology

High level of radiopacity

Natural fluorescence

Superior handling – easy sculpting without slumping or sticking

High fiber load and high flexural strength ensure long-term stability

Sustained fluoride release and recharge

Anti-plaque effect minimizes plaque adhesion, inhibits bacterial colonization and plaque accumulation

Ideal light transmission

Natural fluorescence

Optical characteristics with a chameleon effect

High level of aesthetically

Create indistinguishable restorations with optical characteristics of natural teeth

Beautifil II with SPR-G

- **Sustainable fluoride release and recharge with bioactive Giomer Technology**

**Giomer Technology**

- Giomer materials have been clinically vetted in a series of long-term clinical trials. An eight-year clinical research recorded 100% retention rate with no secondary caries, in a 66% retention rate. 2
- **Sustainable fluoride release and recharge with bioactive Giomer Technology**
- **Giomer Technology**
Beautifil® II

Create indistinguishable restorations with optical characteristics of natural teeth. The Beautifil® II fiber structure has been developed to simulate the internal structure of natural teeth with ideal light transmission and optical characteristics. The moderate translucency and light transmission of enamel combined with the light-diffusion of dentin offers predictability aesthetics with a close shade match to natural teeth.

Beautifil II has excellent versatility with natural shade reproduction that can be achieved with a chameleon effect, using a single shade additional shades can be used to achieve exceptional results.

- Clinically proven in 6-12 year clinical studies
- Excellent physical properties

**Giomer Technology**

- Reduction in tooth mineral solubility
- An anti-plaque effect
- Decrease in acid production of cariogenic bacteria
- Prevention of caries and post-operative sensitivity, resulting in the debonding.

Despite multiple advances in dental material science (most of the current composites on the market shrink about 2% to 5%), **beautifil LS** and the resultant stress continue to challenge all clinicians. The unrelieved stress can weaken the bond between the tooth structure and the restoration, eventually producing a gap at the restoration margins. It can also lead to the formation of secondary caries and post-operative sensitivity, resulting in the debonding.

Beautifil II LS incorporates a proprietary Giomer chemistry which facilitates release and recharge of fluoride, strontium and other beneficial ions providing the ability to inhibit plaque formation and establish a stable pH in the oral environment, decreasing the risk for secondary caries.

**Beautifil II LS**

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- Superior handling – easy sculpting without slumping or sticking
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- Sustained fluoride release and recharge
- Anti-plaque effect minimizes plaque adhesion, inhibits bacterial colonization and plaque accumulation
- Ideal light transmission
- Natural fluorescence
- Optical characteristics with a chameleon effect
- High level of opaquity
**PHYSICAL PROPERTIES**

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<th>Beautifil II LS</th>
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<td>Compressive Strength</td>
<td>330 MPa</td>
<td>364 MPa</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>133 MPa</td>
<td>117 MPa</td>
</tr>
<tr>
<td>Color Hardness</td>
<td>82 Hc</td>
<td>96 Hc</td>
</tr>
<tr>
<td>Water Resistance</td>
<td>0.52 wt%</td>
<td>3.42 wt%</td>
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<tr>
<td>Flexural Strength</td>
<td>83 N/mm²</td>
<td>63 N/mm²</td>
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<tr>
<td>Flexural Toughness</td>
<td>3-6 Al/mm</td>
<td>2-6 Al/mm</td>
</tr>
<tr>
<td>Ultimate Retention &amp; Charg</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Viscosity & Luster (Gloss Units)**

- **15 sec polishing**
- **30 sec polishing**

**Photos of Two Dimensional Goniophotometry**

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</tr>
<tr>
<td>Ultimate Retention &amp; Charge</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Fluoride Release & Recharge**

- Yes
- Yes

**Radiopacity**

- 3.4 Al/mm (dentin 1Al/mm)
- 2.0 Al/mm

**Filler Load**

- 83 wt%
- 83 wt%

**Fluoride Release & Recharge**

- Yes
- Yes

**Photo Cell**

- Regular
- Transmission

**Two Dimensional Goniophotometry**

<table>
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<td>Flexural Strength</td>
<td>83 N/mm²</td>
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<tr>
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<td>3-6 Al/mm</td>
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<tr>
<td>Ultimate Retention &amp; Charge</td>
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- Yes

**Radiopacity**

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- 2.0 Al/mm

**Filler Load**

- 83 wt%
- 83 wt%
PHYSICAL PROPERTIES

Compressive Strength

<table>
<thead>
<tr>
<th>Material</th>
<th>Beautifil II</th>
<th>Beautifil II LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>330 MPa</td>
<td>365 MPa</td>
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</table>

Flexural Strength

<table>
<thead>
<tr>
<th>Material</th>
<th>Beautifil II</th>
<th>Beautifil II LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>133 MPa</td>
<td>117 MPa</td>
</tr>
</tbody>
</table>

Vickers Hardness

<table>
<thead>
<tr>
<th>Material</th>
<th>Beautifil II</th>
<th>Beautifil II LS</th>
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</thead>
<tbody>
<tr>
<td>Value</td>
<td>82 Hv</td>
<td>96 Hv</td>
</tr>
</tbody>
</table>

Water Resistance

<table>
<thead>
<tr>
<th>Material</th>
<th>Beautifil II</th>
<th>Beautifil II LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>5.52 wt%</td>
<td>5.46 wt%</td>
</tr>
</tbody>
</table>

Fluoride Release & Recharge

 autonomously

Hydrate Release & Recharge

Yes

No

Polishability & Luster [Gloss Units]

<table>
<thead>
<tr>
<th>Material</th>
<th>Beautifil II</th>
<th>Beautifil II LS</th>
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</thead>
<tbody>
<tr>
<td>Value</td>
<td>0</td>
<td>80</td>
</tr>
</tbody>
</table>

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