Esthetic Post & Core
Solutions from the Leader in Resin Fiber Technology

FibreKleer® & FibreKor® Posts
Build-It® FR™ Fiber Reinforced Core Material
Why Choose Fiber Posts Over Metal?

Fiber posts are often used in cosmetic cases in place of metal posts because of their ability to disappear under all ceramic restorations. However, this is not necessarily the best attribute of fiber posts. It has been proven that teeth restored with FibreKleer and FibreKor Posts are significantly less likely to result in root fractures than teeth restored with metal posts. FibreKleer and FibreKor Posts have been engineered to minimize root fractures, and the data from an independent study proves it. The ability of FibreKleer and FibreKor posts to preserve and protect roots enables clinicians to retreat and restore the tooth even if the restoration fails. When metal posts fail, teeth are significantly more likely to fracture and retreatment is not an option as extraction would be required.

The Study. Seventy extracted anterior teeth were selected and divided into 7 groups of 10. The teeth were prepared and restored with posts and composite cores. Each specimen was loaded on the lingual side of the sample, centered on a 45° angled surface that was cut into the core, using a crosshead speed of 1.00 mm/min until the sample reached ultimate failure. The force required to break the samples and the fracture mode were recorded. The results are presented below.

Fracture Patterns of Posts

<table>
<thead>
<tr>
<th>Posts Type</th>
<th>Strength (Newtons)</th>
<th>Fracture Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Post</td>
<td>563.5 ± 119.3</td>
<td>7 root fractures, 3 core failures</td>
</tr>
<tr>
<td>FibreKleer Serrated Post</td>
<td>404.0 ± 94.1</td>
<td>9 core failures, 1 post fracture</td>
</tr>
<tr>
<td>FibreKleer Parallel Post</td>
<td>376.0 ± 77.9</td>
<td>10 core failures</td>
</tr>
<tr>
<td>FibreKleer Tapered Post</td>
<td>373.8 ± 45.2</td>
<td>7 core failures, 2 post debonds, 1 root fracture</td>
</tr>
<tr>
<td>FibreKor Post</td>
<td>368.0 ± 69.7</td>
<td>9 core failures, 1 post debond</td>
</tr>
<tr>
<td>DT Light-Post® Tapered Post</td>
<td>246.7 ± 81.4</td>
<td>10 core failures</td>
</tr>
</tbody>
</table>

FibreKleer® Posts feature unmistakable radiopacity combined with superior strength and outstanding esthetics, plus the added feature of light transmission through the post. Engineered with a unidirectional arrangement of glass fibers in a proprietary clear resin matrix, FibreKleer Posts provide an impressive flexural strength of 1423 MPa and a flexural modulus of 23 GPa. The clarity and transparency of the FibreKleer Post enables it to blend seamlessly with natural dentition for beautiful esthetic restorations that eliminate the grey gumline effect that frequently occurs with metal posts. For streamlined post placement and to promote adhesion, FibreKleer Posts are now pre-silanated. All FibreKleer Posts offer the perfect balance of strength, flexibility, and esthetics to help you safely and cosmetically restore your patients’ smile.

*Photos courtesy of Dr. Michael Maroon, Berlin, CT

*The FibreKleer Post enables instantaneous cure of resin cements.

*Build-It FR Core Material flows evenly onto the preparation without slumping.

*Final esthetic core.
**FibreKor® Post Physical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber Reinforcement:</td>
<td>71% by Weight</td>
</tr>
<tr>
<td>Resin:</td>
<td>29% by Weight</td>
</tr>
<tr>
<td>Flexural Strength (MPa):</td>
<td>1084 ± 78</td>
</tr>
<tr>
<td>Flexural Modulus (GPa):</td>
<td>27 ± 1</td>
</tr>
<tr>
<td>Compressive Strength (MPa):</td>
<td>536 ± 55</td>
</tr>
</tbody>
</table>

**Fit the Post to the Tooth, Not the Tooth to the Post.**

FibreKor Posts are available in 3 unique body designs to suit individual preferences and to meet the challenges each individual clinical situation presents.

- **FibreKleer Serrated Post**
  - Serrated body design for retention along the entire post
  - Serrations provide extra retention for cement and core material
  - Available in 1.125, 1.25, and 1.50mm sizes

- **FibreKleer Parallel Post**
  - Parallel body design with retentive head
  - Retentive head designed for maximum core retention
  - Available in 1.00, 1.25, and 1.50mm sizes

- **FibreKleer Tapered Post**
  - Tapered body design for conservative preparations
  - Closely matches canal shape
  - Available in 1.25, 1.375, and 1.50mm sizes

**The Original FibreKor® Post System**

In 1998 Pentron Clinical Technologies, LLC changed the face of dentistry by introducing the FibreKor Post. FibreKor Posts are comprised of glass fibers bundled in a strong resin matrix designed to provide exceptional strength and outstanding esthetics. Initially designed as a cosmetic alternative to metal posts for use under all ceramic restorations, FibreKor Posts are now used for all post applications due to their ability to minimize the occurrence of root fractures. Excellent esthetics, radiopacity, 6 sizes and years of clinical success make the FibreKor Post a proven choice for your practice.
Build-It® FR™ Fiber Reinforced Core Material

A Cut Above the Rest

Build-It FR Fiber Reinforced Core Material is the perfect material to use with FibreKleer and FibreKor Posts. Formulated to flow and stack without slumping, the material’s unique viscosity enables it to be used as a post cement. Specially treated glass fibers give it a compressive strength of 280 MPa for a strong and reliable foundation for your indirect restorations. Designed to offer optimal versatility and performance, Build-It FR Core Material self-cures in minutes or light-cures in seconds to a rock-hard consistency that cuts like dentin without ditching. Choose from shades A2, A3, Opaque White, Gold, and Blue in either 25ml auto-mix cartridges or 4ml Mini Mix™ syringes.

Finished Core. Photo courtesy of John Highsmith DDS

Build-It® FR™ Material Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>
| Filler                        | 68% by Weight  
                             | 52% by Volume |
| Compressive Strength (MPa):   | 280 ± 47  |
| Flexural Strength (MPa):      | 120 ± 8   |
| Flexural Modulus (GPa):       | 15.5 ± 1.5|
| Water Sorption (µg/mm²/wk):   | 12        |
| Barcol hardness (3mm, top and bottom, 10 minutes after setting): | > 90 |
| Working Time:                 | 2–2.5 minutes |
| Setting Time:                 | 3.5–4.0 minutes |

Facilitate Core Fabrication with Build-It® Core Forms

Build-It Core Forms are the ideal way to quickly and efficiently fabricate perfectly shaped cores. These disposable, transparent core forms come in six pre-contoured shapes for light curing Build-It FR Core Material with little to no waste.
The FibreKleer® Post System

Unbeatable Light Transmission

The light transmission provided by the FibreKleer Posts offer the capability for immediate photo initiation of dual-cure resin cements. An independent study* testing the light transmission of fiber posts determined that FibreKleer Posts offer greater light transmission and resulted in 10% more conversion of dual-cure resin cement when compared to a leading brand.

Unmatched Esthetics

Due to their transparency and ability to blend with natural dentition, FibreKleer Posts are ideal for use under metal-free restorations. The transparency of the post takes on the shade of the restoration so the tooth can be restored without compromising the esthetics of the final restoration.

All FibreKleer® Posts offer the following benefits:

> Mimic Properties of the Root
  Flexural modulus engineered to minimize root fractures.

> Create a Monobloc
  Advanced resin-fiber technology ensures compatibility to resin cements and core materials.

> Optimum Clarity
  Transmits light for an instantaneous cure.

> Choice of Body Styles
  Available in Serrated, Parallel, and Tapered body designs.

* Data available upon request
### FibreKlear® Post System Kits
- **FibreKlear Parallel Post System Kit**
- **FibreKlear Tapered Post System Kit**
- **FibreKlear Serrated Post System Kit**
  
  Kits include 30 Posts (10 each of 3 sizes), 3 Drills (1 each of 3 sizes), Tweezers, Instructions and MSDS

### FibreKlear® Post Refills
- **Parallel Post**
  - 1.00mm Post
  - 1.25mm Post
  - 1.50mm Post

- **Tapered Post**
  - 1.25mm Post
  - 1.375mm Post
  - 1.50mm Post

- **Serrated Post**
  - 1.125mm Post
  - 1.25mm Post
  - 1.50mm Post

### FibreKlear® Post Refill Combo Packs
- 10 each of Parallel Post Sizes (1.00, 1.25, 1.50mm)
- 10 each of Tapered Post Sizes (1.25, 1.375, 1.50mm)
- 10 each of Serrated Post Sizes (1.125, 1.25, 1.50mm)

### FibreKor® Post System Kit
- **FibreKor Post System Kit**
  
  Kits include 30 Posts (10 each of 3 sizes), 3 Drills (1 each of 3 sizes), Tweezers, Instructions and MSDS

### FibreKor® Post Refills
- **Parallel Post**
  - 1.00mm Post
  - 1.125mm Post
  - 1.25mm Post
  - 1.375mm Post
  - 1.50mm Post

- **Tapered Post**
  - 1.25mm Post
  - 1.375mm Post
  - 1.50mm Post

- **Serrated Post**
  - 1.125mm Post
  - 1.25mm Post
  - 1.50mm Post

### FibreKor® Post Refill Combo Packs
- 10 each of Post Sizes (1.00, 1.25, 1.50mm)

### Drill Refills
- **Parallel & Serrated Drill Refills**
  - 1.00mm Drill
  - 1.125mm Drill
  - 1.25mm Drill

- **Tapered Drill Refills**
  - 1.25mm Drill
  - 1.375mm Drill

### Build-It® FR™ Fiber Reinforced Core Build-Up Material Kit
- **Build-It FR Fiber Reinforced Core Material Kit**
  
  Kit includes 25ml Auto-Mix Cartridge A2, Build-It FR Dispensing Gun, Instructions, Accessories and MSDS

### Build-It® FR™ 25ml Refills
- A2: REF N32AA
- A3: REF N32AE
- Blue: REF N32AC

### Build-It® FR™ Mini-Mix™ Fiber Reinforced Core Build-Up Material Kit
- **Build-It FR Mini-Mix Fiber Reinforced Core Material Kit**
  
  Kit includes 5 – 4ml Syringes (A2, A3, Blue, Gold, & Opaque White), Instructions, Accessories and MSDS

### Build-It® FR™ Mini-Mix™ 4pk Refills
- A2: REF N32FA
- A3: REF N32FB
- Blue: REF N32FC

For more information on our entire line of innovative post & core products visit us at [www.pentron.com](http://www.pentron.com) or call us at 1.800.551.0283