

2007

REALITY
Four Star Award



Esthetic Post & Core

Solutions from the Leader in
Resin Fiber Technology

FibreKlear® & FibreKor® Posts

Build-It® FR™ Fiber Reinforced
Core Material



Advancing dentistry one innovation at a time.™

The FibreKleer® Post System



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.



*The *FibreKleer* Post enables instantaneous cure of resin cements.



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



*Final esthetic core.

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

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

	Strength (Newtons)	Fracture Mode
Metal Post	563.5 ± 119.3	7 root fractures, 3 core failures
<i>FibreKleer</i> Serrated Post	404.0 ± 94.1	9 core failures, 1 post fracture
<i>FibreKleer</i> Parallel Post	376.9 ± 77.9	10 core failures
<i>FibreKleer</i> Tapered Post	373.8 ± 45.2	7 core failures, 2 post debonds, 1 root fracture
<i>FibreKor</i> Post	368.0 ± 69.7	9 core failures, 1 post debond
DT Light-Post®** Tapered Post	246.7 ± 81.4	10 core failures

Latta, M.A., Barkmeier, W.W., Kimmes, N.S. and O'Meara, J.D. Failure Resistance of Post/Core Assemblies. J Dent Res 85:A(Abstract 377), 2006. Full study available upon request. **DT Light-Post is a registered trademark of RTD France.

FibreKleer® Post Physical Properties

Fiber Reinforcement:	81-84% by Weight
Resin:	16-19% by Weight
Flexural Strength (MPa):	1423 ± 78
Flexural Modulus (GPa):	23 ± 1
Compressive Strength (MPa):	519 ± 49



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

FibreKleer 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 Tapered Post

- > Tapered body design for conservative preparations
- > Closely matches canal shape
- > Available in 1.25, 1.375, 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

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.

FibreKor® Post Physical Properties

Fiber Reinforcement:	71% by Weight
Resin:	29% by Weight
Flexural Strength (MPa):	1084 ± 78
Flexural Modulus (GPa):	27 ± 1
Compressive Strength (MPa):	536 ± 55



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

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/mm ³ /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.

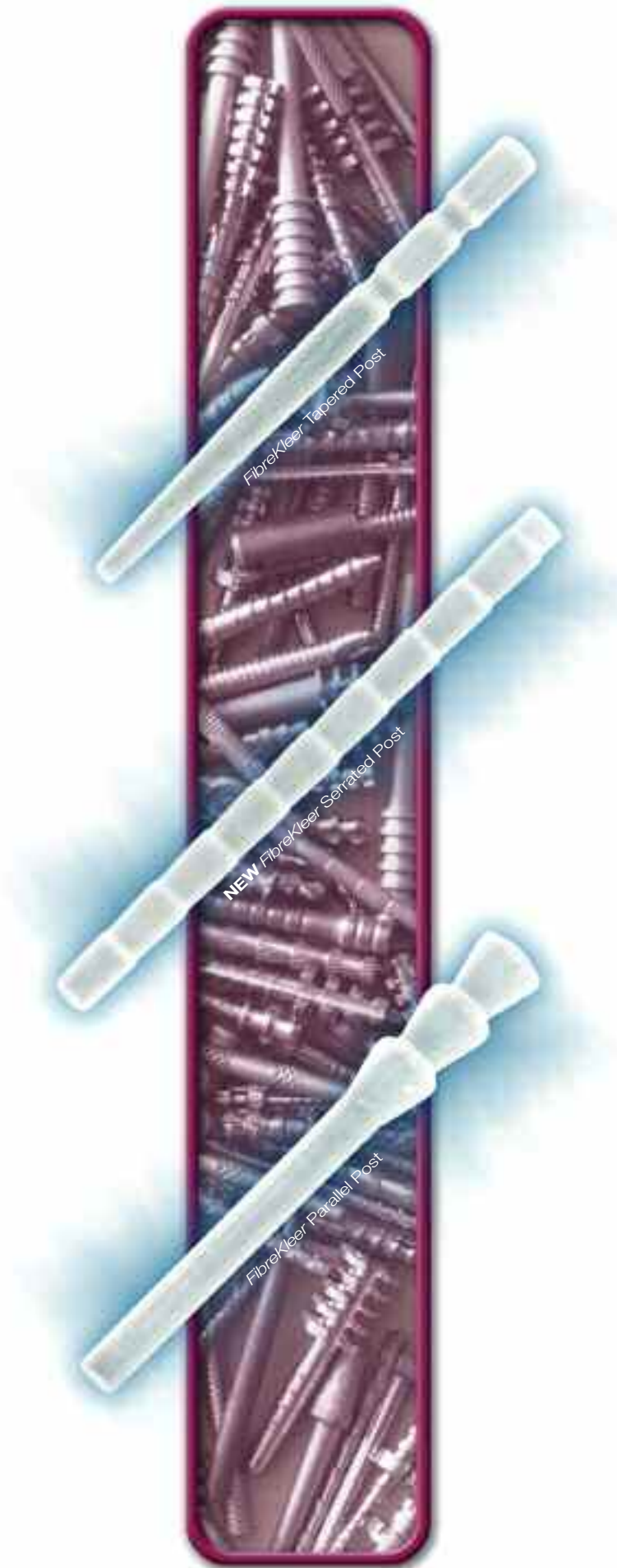
Unmatched Esthetics

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



Pentron Clinical™

Post & Core

Ordering Information

FibreKleer® Post System Kits

FibreKleer Parallel Post System Kit	REF N80
FibreKleer Tapered Post System Kit	REF N81
FibreKleer Serrated Post System Kit	REF N82
<i>Kits include 30 Posts (10 each of 3 sizes), 3 Drills (1 each of 3 sizes), Tweezers, Instructions and MSDS</i>	

FibreKleer® Post Refills

Parallel Post	30pk Refills	10pk Refills
1.00mm Post	REF N80BA	REF N80AA
1.25mm Post	REF N80BB	REF N80AB
1.50mm Post	REF N80BC	REF N80AC
Tapered Post		
1.25mm Post	REF N81BA	REF N81AA
1.375mm Post	REF N81BB	REF N81AB
1.50mm Post	REF N81BC	REF N81AC
Serrated Post		
1.125mm Post	REF N82AA	REF N82A
1.25mm Post	REF N82BB	REF N82B
1.50mm Post	REF N82CC	REF N82C

FibreKleer® Post Refill Combo Packs

10 each of Parallel Post Sizes (1.00, 1.25, 1.50mm)	REF N80BD
10 each of Tapered Post Sizes (1.25, 1.375, 1.50mm)	REF N81BD
10 each of Serrated Post Sizes (1.125, 1.25, 1.50mm)	REF N82BD

FibreKor® Post System Kit

FibreKor Post System Kit	REF N18
<i>Kits include 30 Posts (10 each of 3 sizes), 3 Drills (1 each of 3 sizes), Tweezers, Instructions and MSDS</i>	

FibreKor® Post Refills

Post Refills	30pk Refills	10pk Refills
1.00mm Post	REF N18AB	REF N18BA
1.125mm Post	REF N18AC	REF N18BD
1.25mm Post	REF N18AD	REF N18BB
1.375mm Post	REF N18AE	REF N18BE
1.50mm Post	REF N18AF	REF N18BC
1.75mm Post	REF N18AG	REF N18BG

FibreKor® Post Refill Combo Pack

10 each of Post Sizes (1.00, 1.25, 1.50mm)	REF N18A
--	----------

Drill Refills

Parallel & Serrated Drill Refills			
1.00mm Drill	REF N18DA	1.375mm Drill	REF N18DE
1.125mm Drill	REF N18DD	1.50mm Drill	REF N18DC
1.25mm Drill	REF N18DB	1.75mm Drill	REF N18DF
Tapered Drill Refills			
1.25mm Drill	REF N81CA	1.50mm Drill	REF N81CC
1.375mm Drill	REF N81CB		

Build-It® FR™ Fiber Reinforced Core Build-Up Material Kit

Build-It FR Fiber Reinforced Core Material Kit	REF N32
<i>Kit includes 25ml Auto-Mix Cartridge A2, Build-It FR Dispensing Gun, Instructions, Accessories and MSDS</i>	

Build-It® FR™ 25ml Refills

A2	REF N32AA	Gold	REF N32AB
A3	REF N32AE	Opalescent White	REF N32AD
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	REF N32F
<i>Kit includes 5 – 4ml Syringes (A2, A3, Blue, Gold, & Opalescent White), Instructions, Accessories and MSDS</i>	

Build-It® FR™ Mini-Mix™ 4pk Refills

A2	REF N32FA	Gold	REF N32FC
A3	REF N32FB	Opalescent White	REF N32FE
Blue	REF N32FD	Mini Mix™ Dispensing Gun	REF N75S

For more information on our entire line of innovative post & core products visit us at www.pentron.com or call us at **1.800.551.0283**



Advancing dentistry one innovation at a time.™