# Obturation Success for Everyone





### BioRoot Flow

Bioceramic Root Canal Sealer



## BioRoot® Flow makes obturation easy

### Ready-to-use syringe

- ► Easy and fast: no preparation time
- ► Consistent viscosity all the time
- ▶ Warm or cold obturation

### Direct intra-canal delivery

- ► 21-gauge bendable tip
- ► Ensures adaptation to all root canals
- Limits the risk of overfilling



### Keep your technique

- ▶ Keep your preferred obturation technique
- ➤ Or shift to easy single cone technique with efficient results (1)

#### Highly radiopaque

- >5 mm Al radiopacity
- ► Easily visible on X-Rays

#### Easy extrusion

- ► Limited plunger resistance (2)
- Anatomic finger grip for improved syringe handling
- Easy and precise delivery in mouth
- ► More comfortable and user-friendly (2)

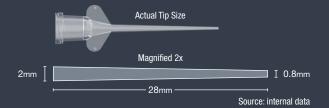
### Easily retreatable<sup>(3)</sup>

- Easy and fast to remove if necessary
- ▶ Use hand files or rotary NiTi files

#### > Technical Insights

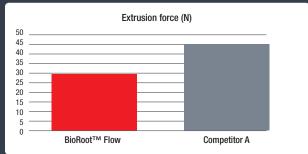
#### Innovative tip allows direct & precise placement in the root canal

- Flexible tips allow bending and access to all root anatomies
- Precise 21-gauge diameter for optimal delivery limiting the risk of going too deep



#### (2) Less force needed for product extrusion

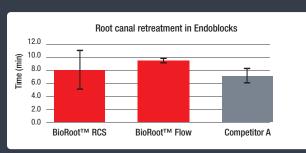
- BioRoot Flow requires only 30N
- Product extrusion is easy and comfortable



Source: internal data

#### (3) Easy and fast removal from root canal

 BioRoot Flow is removed to working length in less than 10 min



Source: internal data

### BioRoot® Flow for successful obturation

#### No Shrinkage<sup>®</sup>

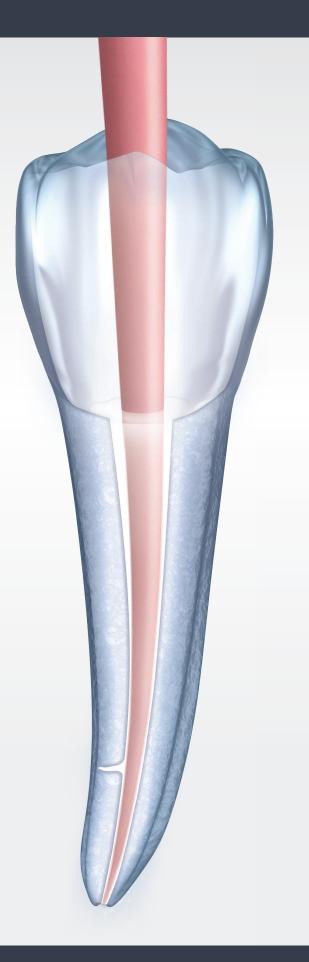
- ▶ Resin-free formulation
- ► Hermetic seal of the root canal (2)
- ► Allows best results even with single cone technique (3)

#### Limits bacterial growth

- ► High pH 8.5-11.5
- ► Creates an alkaline (4) environment, inhibiting bacterial growth

#### Penetrates radicular canals

- ▶ Without the need for compaction
- ► Hydrophilic sealer that seeks residual water in accessory canals & tubules (5)
- ► Excellent flowability of 23 mm and low solubility of 1.5% (6)



<sup>(1)</sup> Internal data. Pr Colon report

<sup>(2)</sup> Endodontic Implantation test . June 2020

<sup>(3)</sup> Mannocci. CED IADR 2019

<sup>(5)</sup> Drukteinis & Camilleri : Bioceramic materials in clinical endodontics. Springer 2020

<sup>(6)</sup> Internal data

#### Biocompatible (7)

- High purity calcium silicate from proprietary manufacturing process
- ► Ensures favorable tissue response
- Limits the risk of adverse reaction

#### Bioactive: triggers mineralization®

- ► Calcium ion release forms hydroxyapatite
- ▶ Increases the mineral density of dentin

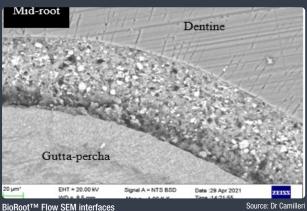
#### Allows best results even with single cone technique

- ▶ Unique benefits of calcium silicate enhancing cold technique efficacy
- Obturation is just as successful as with warm techniques (3)

#### > Technical Insights

#### Hermetic seal of the root canal

- Excellent adhesion to dentin and gutta-percha
- Eliminates residual spaces for bacteria to grow



#### (8) Bioactivity and mineralization

 BioRoot Flow induces hydroxyapatite crystal formation by the reaction between calcium hydroxide and phosphate.

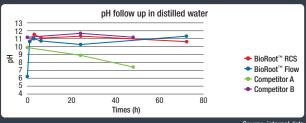


Image shows BioRoot Flow is immersed in Phosphate Buffered Saline (PBS - left picture) vs. water (right picture)

Source: internal data

#### (4) Long lasting high pH

 High pH is maintained over time, creating an alkaline environment in which bacteria will not grow



Source: internal data

## BioRoot® Flow is made for everyone

#### Whatever your technique

Warm or Cold, BioRoot Flow allows reproducible success

#### **Cold Technique**

- ► No shrinkage ensuring no gaps or voids (1)
- ► Excellent flow to penetrate accessory canals without compaction (2)
- ► Tight adhesion to dentin and gutta-percha for lower risk of bacterial infiltration (3)



#### **Warm Technique**

- ► Thin film thickness contributing to the clinical performance of the obturation
- Material remains stable while heated



<sup>(1)</sup> Internal data. Pr Colon report

<sup>(2)</sup> Drukteinis & Camilleri : Bioceramic materials in clinical endodontics. Springer 2020

<sup>(3)</sup> BioRoot™ flow SEM interfaces. Dr Camilleri



#### Whatever your practice

General dentistry or endodontics, BioRoot Flow is designed for you

#### **General Dentistry**

- BioRoot Flow takes single cone technique to the next level
- ► Allows you to save chair time with each endo patient
- ► Giving you the confidence with quality obturation (4)

#### **Endodontics**

- BioRoot Flow penetrates areas that are hard to reach with a heated plugger (e.g. complex root canal anatomy)
- ► Consistent sealing quality whatever the obturation technique used (3)
- ► BioRoot Flow helps you save teeth by avoiding extractions

#### **Technical Features**

Working time	>60 min
Setting time	5 to 6h00
Extrusion Force	30N
рН	8.5 - 11.5
Calcium release	High

Radiopacity	6.3 mm Al
Flow	23.2 mm
Film Thickness	20.8 μm
Solubility	1.5%
Source: internal data; Dr Camilleri	



#### **Product information**

- (1) 2g syringe
- (1) finger grip
- (20) intra-oral tips

Item #01E0510

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