

GuttaFlow bioseal

Bioceramic Obturation Material for Sealing & Filling Root Canals



Supporting patients' healing process

Your Challenge

Solution: GuttaFlow bioseal

Poor sealing and compatibility issues with biological tissues

Supports the formation of hydroxyapatite crystals due to its bioactivity.¹

Risk of reinfection after treatment

Protection against reinfection due to a tight seal and balanced expansion for reliable success.²

Challenges in treatment and material removal

Facilitates good and efficient retrievability if retreatment is required, supporting improved consistent outcomes.³

Uneven distribution of sealing materials in small or complex canal anatomies, leading to gaps or incomplete sealing.

Optimum distribution throughout the root canal. GuttaFlow is also thixotropic, meaning the viscosity diminishes under pressure. The material therefore flows into the small canals.⁴

Potential for excessive material solubility

Nearly insoluble, occurs only at the direct interface – no further solubility occurs according to ISO standards.⁵

Lengthy curing times of conventional materials delay procedures, requiring multiple appointments and increasing patient inconvenience

Short curing time allowing a post placement within the same appointment.⁶

GuttaFlow bioseal is an advanced bioceramic obturation material designed for sealing and filling root canals. Upon contact with the body's natural fluids, it **forms hydroxyapatite crystals**, which are integral components of bone and tooth tissue. This process supports the healing journey, making it a good choice **for both experienced endodontists and beginners** in providing reliable solutions for their patients.

Technical Data

Medical Device Class ⁷	2a
Consistency	Viscous
Dosage form	2 chamber syringe
Volume syringe	5 ml
Mixing procedure	Homogeneously mixing within the mixing tip
Composition	Polydimethylsiloxane, Guttapercha powder, Bioactive glass, Zirconium dioxide, Pigments, Platinum catalyst and other fillers
Chemical base	Silicone (polydimethylsiloxane)
Bioactivity	✓
Bioceramic	✓
Formation of hydroxyapatite crystals	✓
Colour	Pink
Recommended filling method	Cold obturation
Working time*	5 min
Setting time*	12-16 min
Film thickness*	≤ 50 µm
Expansion*	✓
Solubility	≤ 1.29 %
Adhesion to dentin	3 MPa
Radiopacity*	≥ 3 mm Al
Retreatability*	✓
Storage temperature	18°-24°C

* Stated Standard ISO 6876

Bioactive Sealing

The bioactive properties of GuttaFlow bioseal are demonstrated by the formation of hydroxyapatite crystals on its surface.



At 3.5x magnification the material's surface shows the distinct development of hydroxyapatite crystals.⁵



Under 2500x magnification the detailed morphology of hydroxyapatite crystals becomes more evident through scanning electron microscopy.⁵



You have questions?
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¹ Taddei P. et al, The Influence of the Matrix on the Apatite-Forming Ability of Calcium Containing Polydimethylsiloxane-Based Cements for Endodontics, 2022

² Gandolfi MG et. Al., Properties of a novel polysiloxane-guttapercha calcium silicate-bioglass-containing root canal, 2016.

³ Obeid M et.al., Impact of LASER activated irrigation on the retrievability of GuttaFlow bioseal (in-vitro study), 2024.

⁴ Shumilovich et al., Bio-Active Materials For Root Canal Obturation The Filling System With Cold Free-Flow Guttapercha GuttaFlow bioseal, 2018.

⁵ Internal Testing.

⁶ Shumilovich et.al. Comparative clinical and laboratory characteristics of the quality of the filling of root canals using three obturation systems, 2016.

⁷ According to MDR (REGULATION (EU) 2017/745).

ORDER INFORMATION

GuttaFlow bioseal

60019560 Starter Set
60019561 Refill Syringe
60019562 Mixing Tips, 24 pcs