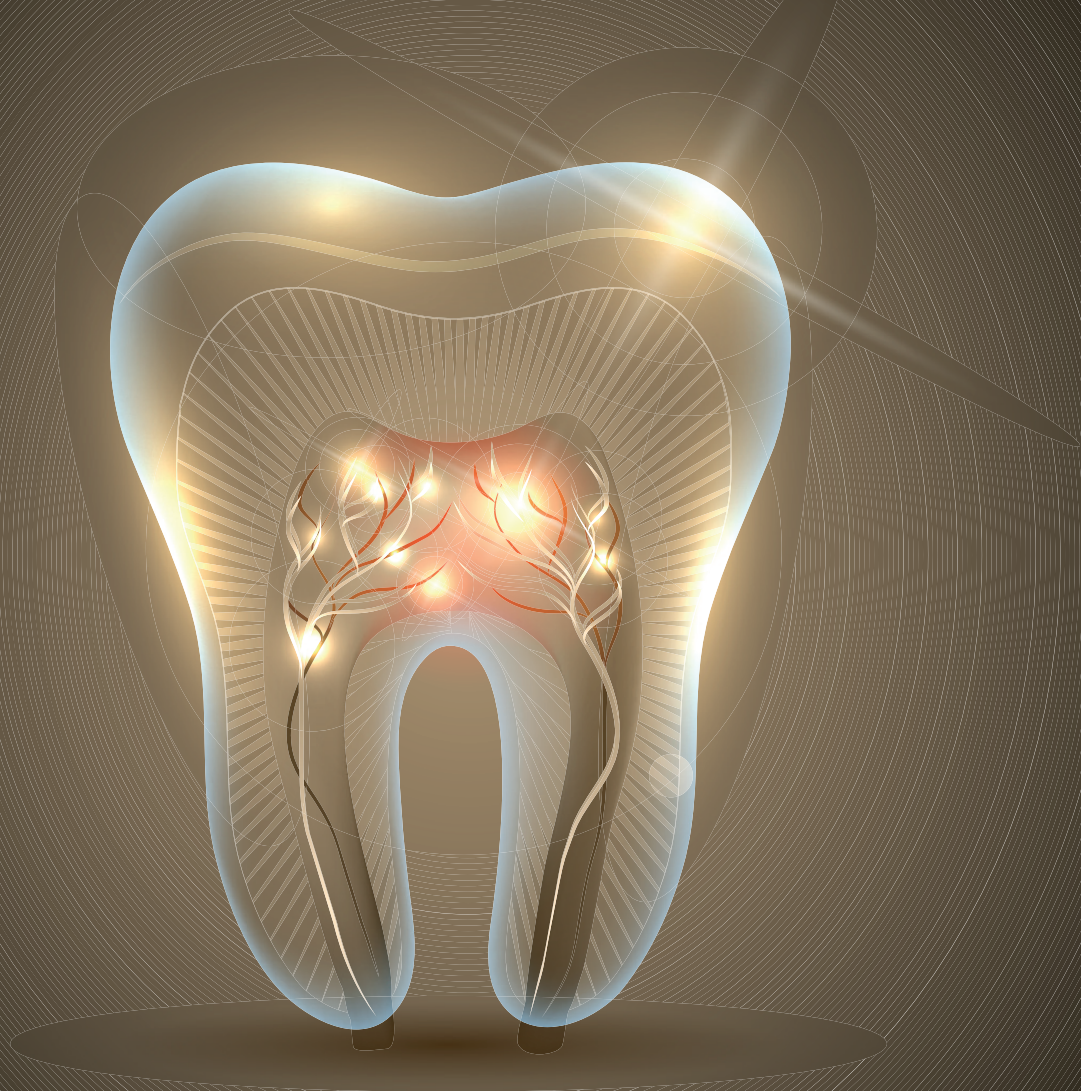


Dia Dent

www.diadent.com



BIOCOMPATIBLE

SUPERIOR BONDING

ANTIBACTERIAL

REGENERATIVE

DIA-ROOT™

BIO SEALER & BIO MTA

DIA-ROOT™ BIO SEALER

BioCeramic Root Canal Sealing Material



22mm
Flow

19µm
Film thickness

0.95%
Solubility

8.1mm
Radiopacity

DIA-ROOT BIO Sealer is a pre-mixed bioceramic calcium silicate-based MTA sealer. Its non-shrinking feature and strong bonding ability make it the perfect sealer for permanent obturation and suitable for all obturation techniques with gutta percha.

FEATURES & BENEFITS

High Biocompatibility:

- Heals tissue with minimal inflammatory reaction
- Release calcium ions (calcium hydroxide) and helps bone and tissue regeneration
- Forms calcium silicate hydrate that improves the sealing ability over time

Excellent Sealing Ability:

- Zero shrinkage
- Superior adhesion strength to dentin and gutta percha than traditional root canal sealer

Low Solubility:

- Low solubility (0.95%) to maintain an excellent seal inside the root canal
- Washout resistant to prevent micro-leakage

Optimal Flowability:

- High flow rate of 22mm
- Low film thickness of 19 µm
- Effectively flows into and kills microbes throughout all aspects of the root canal system

Pre-Mixed and Pre-Filled Syringe:

- Ready-to-use formula, no mixing required
- User friendly, convenient, and saves time
- Setting time is 6 hours (depending on the condition of the root canal)

Easy to Store:

- Can be stored over 6 months after use
- Does not harden easily
- Reduces waste of material to a minimum

ORDER NUMBER

Item #1003-701
Regular Kit Content:

- 1 x 2g syringe
- 20 disposable tips
- 1 x silicone cap

BIOCOMPATIBILITY

- Minimizes the possibility of inflammation
- Enhances osteoblastic differentiation
- Passing all toxicity tests
- Hydrophilic and sets in contact with moisture

SUPERIOR BONDING

- Superior bonding to the dentin and gutta percha reduces the possibility of micro-leakage and reinfection of the root canal

HIGHLY ANTIBACTERIAL

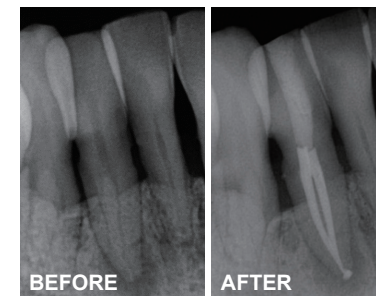
- High alkaline pH (12) is highly antibacterial
- High antimicrobial activity helps to decrease or prevent the growth of microorganisms and aid the repair process of apical and periapical tissues.

HIGHLY RADIOPAQUE 8.1mm AI

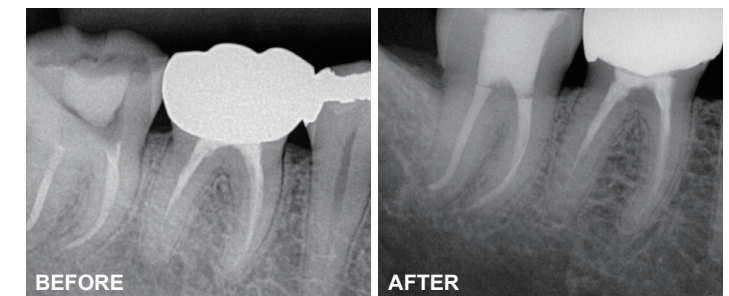
CLINICAL CASES

Complete sealing without tissue irritations.

Case 1



Case 2

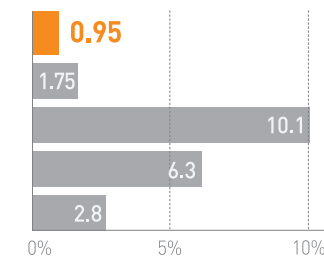


Tests:

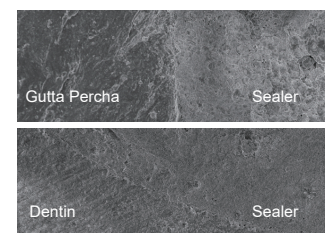
- ✓ Cytotoxicity
- ✓ Oral mucosal irritation test
- ✓ Pyrogen test
- ✓ Acute systemic toxicity test
- ✓ Sensitization test

Solubility

DIA-ROOT
BIO SEALER
Company A
Company B
Company C
Company D

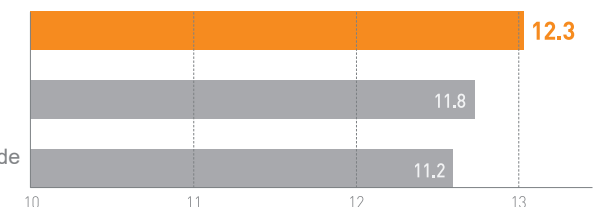


Excellent Adhesion

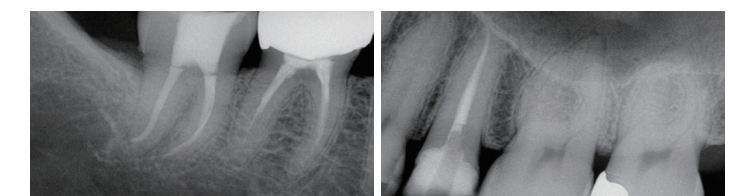


pH Test

DIA-ROOT
BIO SEALER
Resin Sealer
(Dia-ProSeal)
Calcium Hydroxide
Sealer



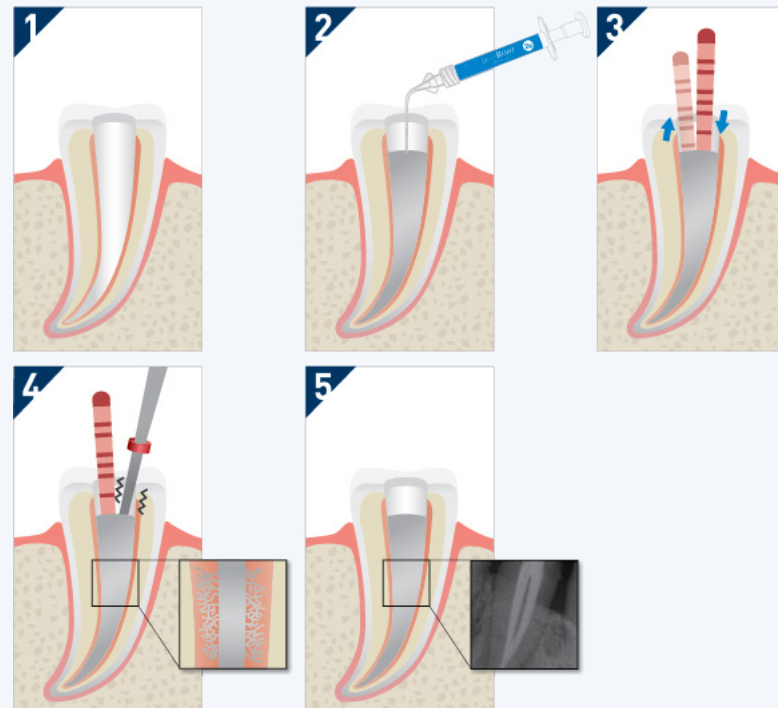
Radiopacity



TECHNIQUE GUIDE

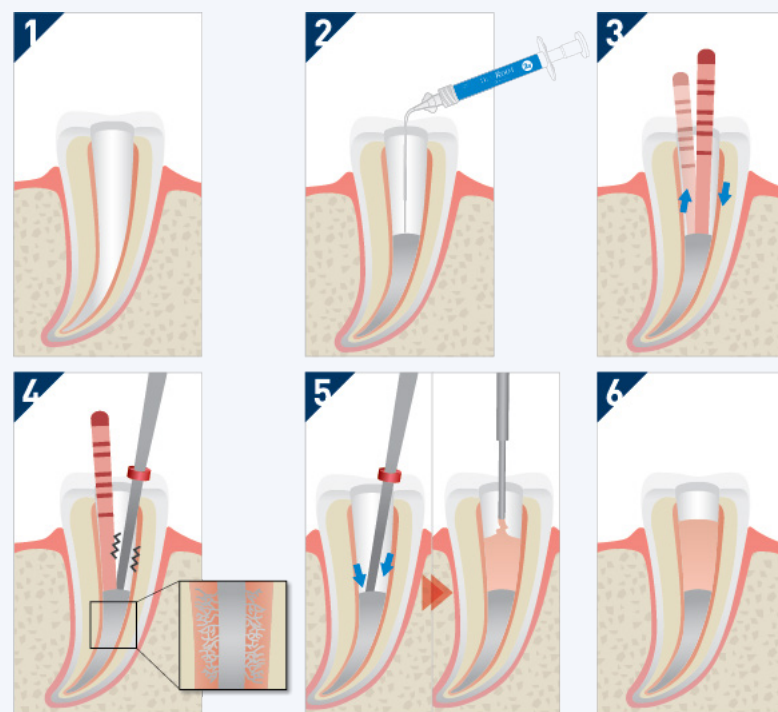
SINGLE CONE TECHNIQUE

- 1 Prepare the root canal, cleaned and dried.
- 2 Fill the root canal slowly with **DIA-ROOT BIO SEALER** to the coronal third of the canal.
- 3 Insert the selected gutta percha cone and lightly pump the gutta percha cone up and down the root canal to fill up the apex.
- 4 Cut the master cone at the desired level with **DUO-PEN** and remove the excess sealer from the root canal.
- 5 Complete root canal treatment.



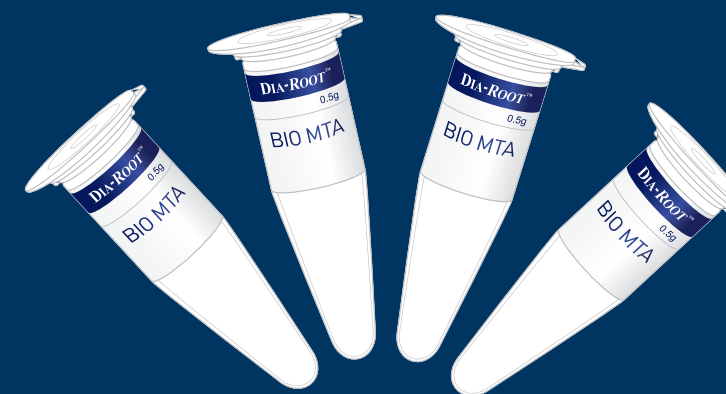
TRADITIONAL TECHNIQUE WITH ROOT CANAL OBTURATION DEVICE

- 1 Prepare the root canal, cleaned and dried.
- 2 Fill the root canal slowly with **DIA-ROOT BIO SEALER** to the coronal third of the canal.
- 3 Insert the selected gutta percha cone and lightly pump the gutta percha cone up and down the root canal to fill up the apex.
- 4 Cut the master cone at the desired level with **DUO-PEN**.
- 5 Condense the gutta percha cone with **DUO-PEN** and extrude melted gutta percha and fill the canal with **DUO-GUN**.
- 6 Complete root canal treatment.



FEATURES & BENEFITS

- Excellent biocompatibility
- Outstanding sealing capability
- White powder is ideal for anterior teeth
- Antibacterial pH 12
- Easy Handling Properties
- Washout resistant



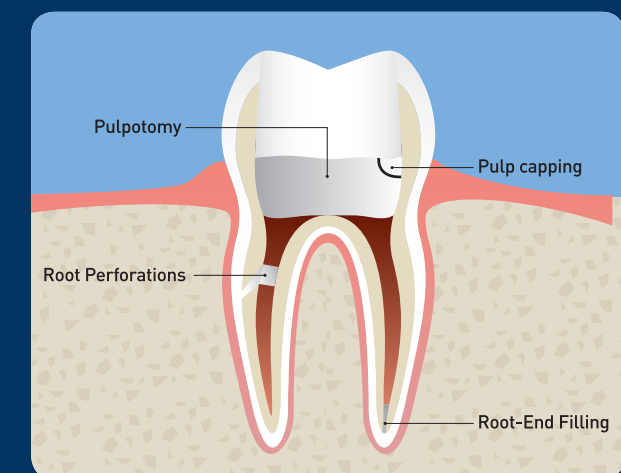
ORDER NUMBER

- Item #1003-601
 Content:
- MTA Powder 0.5g
 - 1 x Mixing Pad
 - 1 x Spatula

DIA-ROOT BIO MTA is a root repair material with excellent biocompatibility and offers distinct advantages for root canal repair procedures. **DIA-ROOT BIO MTA** can efficiently and quickly restore and repair the damaged areas of the root canal back to normal function and appearance. It does not have any adverse side effect on microcirculation of the connective tissue. Its excellent bioactive properties promote tissue healing.

INDICATIONS

- **PULP CAPPING:**
When applied on the pulpal site, DIA-ROOT BIO MTA creates a biocompatible sealing of the pulp. It has very low solubility, so it maintains a hard and excellent marginal seal. It prevents bacterial leakage while maintaining a high level of biocompatibility. It stimulates dentin bridge formation adjacent to dental pulp.
- **REPAIR OF ROOT PERFORATION:**
Ideal treatment for root perforation and iatrogenic furcal perforation.
- **PULPOTOMY:**
DIA-ROOT BIO MTA creates a biocompatible seal and prevents the dental pulp from necrosis. It restores and protects the pulp from infection.
- **ROOT-END FILLING**
DIA-ROOT BIO MTA has excellent sealing ability, an antimicrobial effect, and promotes osteoblast activity to prevent irritants in the root canal to extrude into periradicular tissues. It is non-toxic and well-tolerated by periapical tissues and able to regenerate periapical tissue.



MIXING INSTRUCTIONS

01^{Step}



02^{Step}



03^{Step}



04^{Step}



Pour out the powder from the capsule and mix it with distilled water on the mixing pad.
(Mixing ratio: 0.5 g powder / 0.225 g water)

Mix the distilled water into the powder for about 30 seconds until all the particles are hydrated forming a thick paste-like mixture.

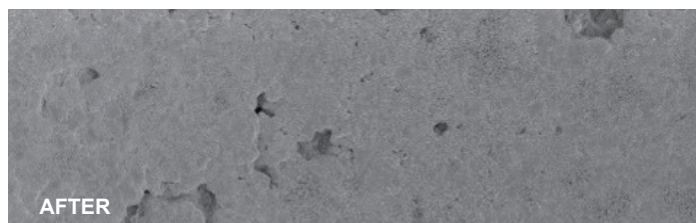
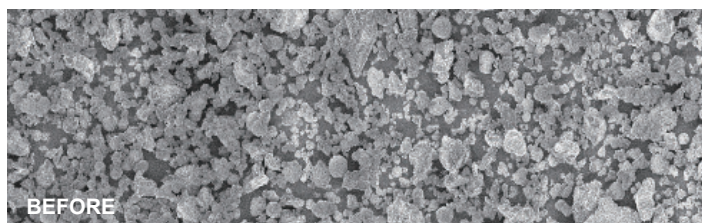
Add distilled water if the mixture hardens or dries out.

Place the mixed paste into a carrier of your choice.

Dispense the mixed paste into the treatment site.

SEM IMAGES

SEM images show outstanding sealing ability of **DIA-ROOT BIO MTA** after hydration.



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