DiaDent®
Passion for Innovation



DIA-ROOT™

BIO SEALER & BIO MTA

- IDEAL FOR ROOT CANAL TREATMENT
- EXCELLENT BIOCOMPATIBILITY
- PERFECT SEALING ABILITY
- ANTIBACTERIAL EFFECT

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DIA-ROOT™ BIO SEALER

Bioceramic Root Canal Sealing Material



FEATURES

DIA-ROOT™ BIO Sealer is a bioceramic MTA-based (Calcium Silicate-based), non-shrinking root canal sealer. It is used for the permanent obturation of root canals and suitable for all obturation techniques involving gutta-percha.

High Biocompatibility:

- Tissue healing with little inflammation
- Produces Calcium Hydroxide and Calcium Silicate Hydrate
- High pH for antibacterial action (pH 12)
- Induces hard tissue regeneration in sites with microbial activity

Perfect Sealing Ability:

- Perfect sealing ability for multiple and lateral root canals
- Superior adhesion between Gutta Percha Points and Dentin
- No Shrinkage or expansion

Low Solubility:

- Low solubility(0.95%) to maintain an excellent sealing effect inside the root canal
- Washout resistant prevents micro leakage

Optimal Flowability:

- Flow rate of 22mm : Completes apical sealing
- High flow rate and low film thickness ensures easy penetration into lateral and accessory canals

Pre-mixed for easy, Convenient and Fast application:

- Ready to use formula in a prefilled and injectable syringe
- Adequate setting time (6 hours)

Easy to store

- Can be stored over 6 months after use
- Does not harden easily and reduce waste of materials to a minimum



ITEM #1003-701

1 syringe x 2g
20 disposable tips
1 silicon cap

22 mm	19 µm	0.95 %	8.1 mm
Flow	Film thickness	Solubility	Radiopacity

BENEFITS

High Biocompatibility

-Tissue healing with little inflammation
-Induces hard tissue regeneration in sites with microbial activity

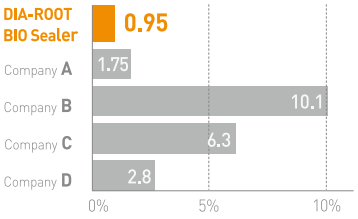
Test Results : Pass

- ☑ Cytotoxicity
- ☑ Oral mucosal irritation test
- ☑ Pyrogen test
- ☑ Acute systemic Toxicity Test
- ☑ Sensitization test

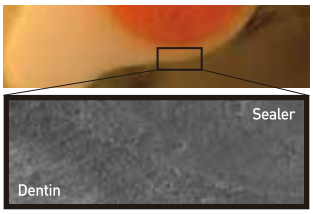
Superior Sealing Ability

-Washout resistant with Low solubility
-Superior adhesion between Gutta Percha Points and Dentin

Solubility



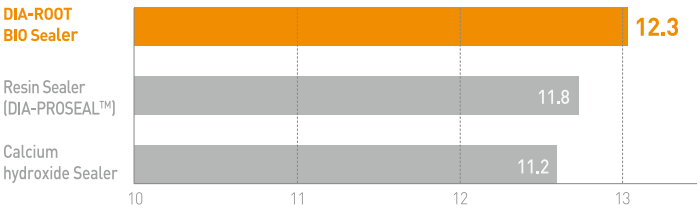
Excellent Adhesion Property



Outstanding Antibacterial Action

-Produces Calcium Hydroxide and Calcium Silicate Hydrate
-High pH for antibacterial action in the root canal (pH 12)

pH Test



Excellent Radiopacity : 8.1mm Al

Radiopacity



CLINICAL CASES

Complete root canal sealing without tissue irritation

Case 1



Case 2



TECHNIC GUIDE

SINGLE CONE TECHNIC

1 Prepare the root canal, cleaned and dried.

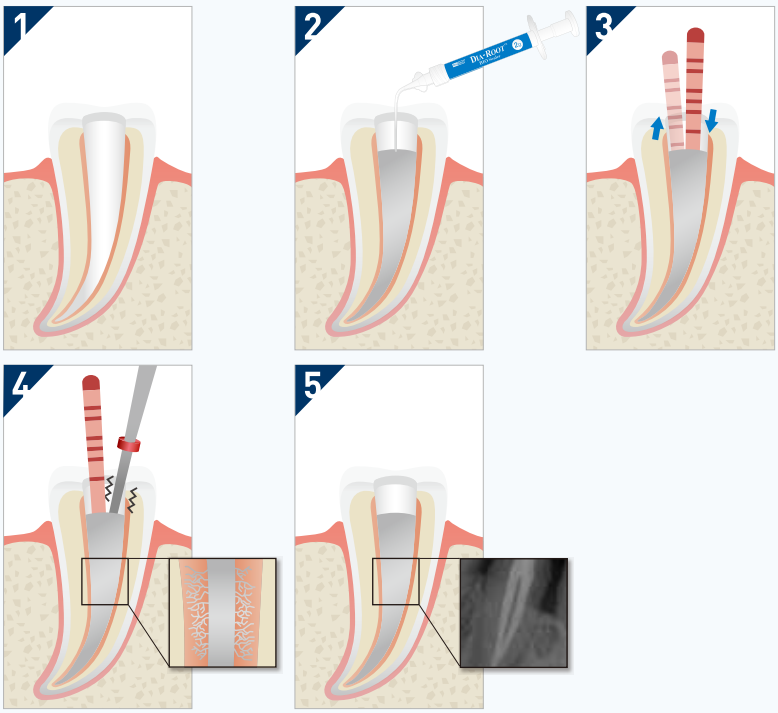
2 Apply DIA-ROOT™ BIO SEALER by the coronal third of the canal.

3 Fill the root canal with selected Gutta Percha cones and lightly pump the Gutta Percha cones up to the root canal to fill up the Apex.



4 Cut the master cone at the desired level with **DUO-PEN** and remove the surplus sealer from the root canal.

5 Complete root canal treatment.



TRADITIONAL TECHNIC WITH ROOT CANAL OBTURATION DEVICE

1 Prepare the root canal, cleaned and dried.

2 Apply DIA-ROOT™ BIO SEALER by the middle third of the canal.

3 Fill the root canal with selected Gutta Percha cones and lightly pump the Gutta Percha cones up to the root canal to fill up the Apex.

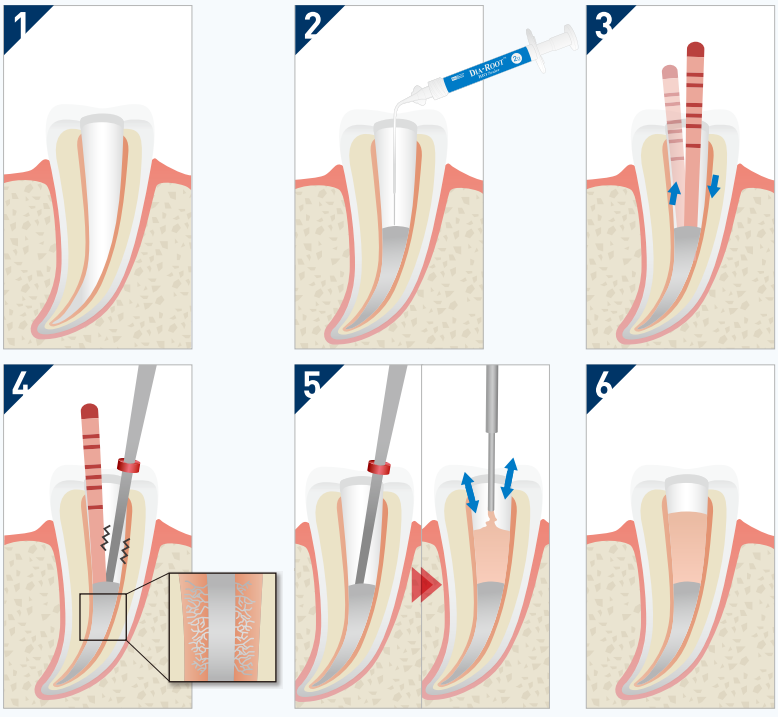


4 Cut the master cone at the desired level with **DUO-PEN**.

5 Condense the Gutta Percha cones with **DUO-PEN** and fill melted Gutta Percha in the rest of canal by **DUO-GUN**.



6 Complete root canal treatment.



DIA-ROOT™ BIO MTA

Mineral Trioxide Aggregate

DIA-ROOT™ BIO MTA is a root repair materials with excellent biocompatibility and offers distinct advantages for root canal repair procedures. And it restores the damaged areas root canal to normal function and appearance, quickly and efficiently. It does not produce any adverse site effect on microcirculation of the connective tissue and its bioactive properties promote healing.



BENEFITS

- Good Biocompatibility
- Outstanding Sealing Capabilities
- White powder is ideal for Anterior teeth
- Antibacterial Effect (pH 12)
- Easy Handling Properties
- Resists washout



ITEM #1003-601

MTA powder 0.5g
1 mixing pad
1 spatula

INDICATIONS

PULP CAPPING

When applied on the pulpal site, it creates a biocompatible sealing of the pulp. **DIA-ROOT™ BIO MTA** prevents the bacterial leakage with a high level of biocompatibility. It stimulates dentin bridge formation adjacent to dental pulp.

ROOT PERFORATIONS:

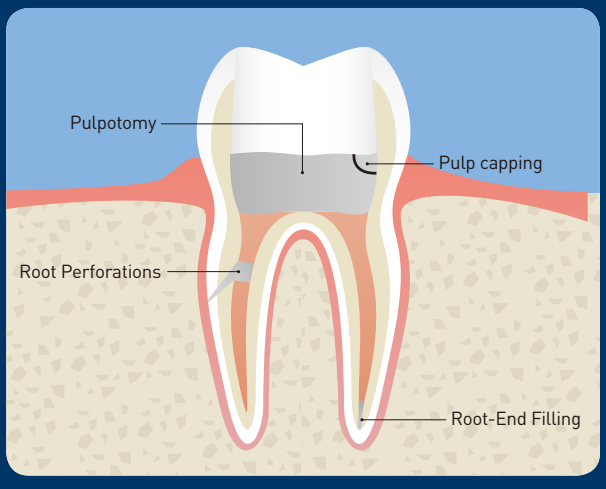
DIA-ROOT™ BIO MTA is ideal for treatment of perforations of root canal and furcation caused iatrogenically or by caries lesion.

PULPOTOMY:

DIA-ROOT™ BIO MTA creates a biocompatible seal, and replacing pulp in the chamber to prevent infection.

ROOT-END FILLING:

DIA-ROOT™ BIO MTA has excellent sealing ability to prevent the irritants in the root canal to extrude into periradicular tissues.

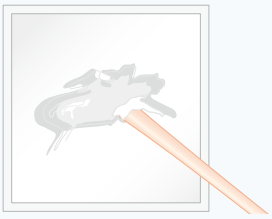


TECHNIC GUIDE

01 Step



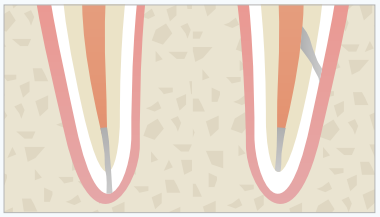
02 Step



03 Step



04 Step



01 Pour the powder and distilled water on the mixing pad. (Mixing ratio : powder 0.5g/ water 0.225g)

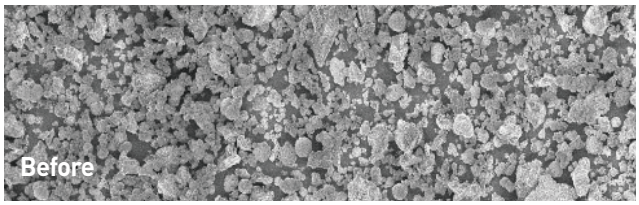
02 Wet the powder and mix it gently.

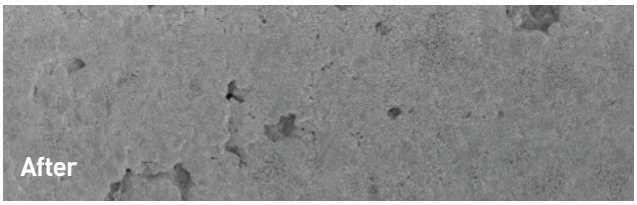
03 Carry the mixture into the carrier.

04 Apply the mixture on the part for the treatment.

HYDRATION

SEM pictures of after Hydration DIA-ROOT ™ BIO MTA show outstanding sealing ability





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