

# Sure-Seal Root™ - Bioceramic Sealer



**Sure-endo**

*Korea. Since 1974*

## ▷ Materials used for obturation

- A large number of materials have been used to obturate root canal sealing ranging from orange wood sticks through precious metals to dental cements, but most materials that showed a wild world usage are the Gutta-Percha and sealers
- A root canal sealer is used in combination with root filling materials(gutta-percha). Now the sealer has a primary role in sealing the canal by obliterating the irregularities between the canal wall and the core material



## ▷ **Function of root canal sealer**

- **Act as a binding agent, to the dentin and to the core material**
- **Help to fill irregularities and minor discrepancies**
- **Discloses the presence of accessory canals, resorptive areas, root fractures, shape of the apical foramen**
- **Acts as lubricant**
- **Antimicrobial agent**
- **Provide radiopacity**



## ▷ Requirement of an ideal sealer

- Non-irritating to periapical tissue
- Insoluble in tissue fluids
- Dimensionally stable
- Hermetic sealing ability
- Radiopaque
- Bacteriostatic
- Sticky and good adhesion to canal walls when set
- Easily mixed
- Non-staining to dentin
- Good working time
- Readily removable if necessary



## ▷ Requirement of an ideal sealer

### Note:

- There is no single material that satisfy all requirements
- Sealers are toxic and cause periapical irritation when freshly prepared but this reduced after setting
- Most sealer are absorbable, so the volume must be minimum
- Less viscous sealer should be forced by core material into canal anastomoses
- Excess sealer should ideally flow backwards out of the canal orifice



# Sure-Seal Root™ - Bioceramic Sealer

## ▷ Type of root canal sealer

1. Zinc oxide-eugenol sealers
2. Calcium hydroxide sealers
3. Glass ionomer sealer
4. Noneugenol sealers
5. Resin
6. Silicone sealers
7. Bioceramic(MTA)



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## ▷ Characteristics

- **Sure-Seal Root is a convenient premixed ready-to-use injectable bioactive calcium silicate paste developed for permanent obturation of the root canal. Sure-Seal Root is based on a calcium silicate composition, which requires the presence of water to set and harden. Sure-Seal Root does not shrink during setting and demonstrates excellent physical properties.**



# **Sure-Seal Root™** - Bioceramic Sealer

## ▷ Characteristics

- **Indications for use**
  - Permanent obturation of the root canal
- **Composition**
  - Calcium silicate
  - Calcium sodium phosphosilicate
  - Zirconium oxide
  - Thickening agent



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## ▷ **Characteristics**

- **Working time: None**
- **Setting time: 1.5hrs**
- **Flow: 24mm**
- **Film thickness: 19μm**
- **Compressive strength: 60MPa(7day)**

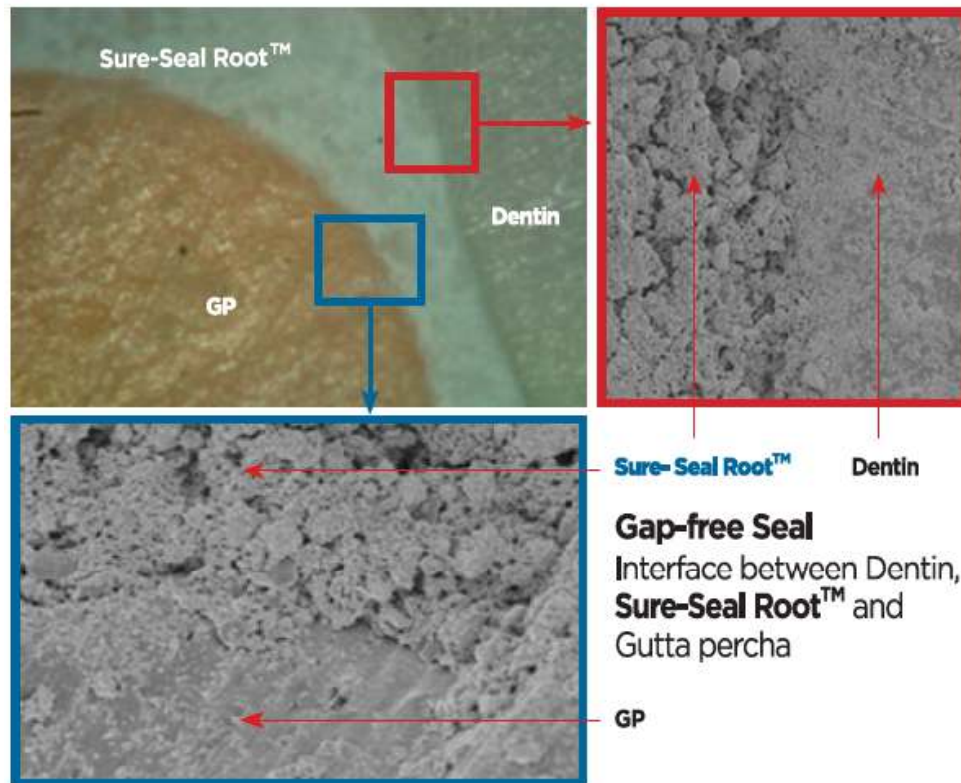


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# Sure-Seal Root™ - Bioceramic Sealer

## Biocompatibility & Superior Sealing



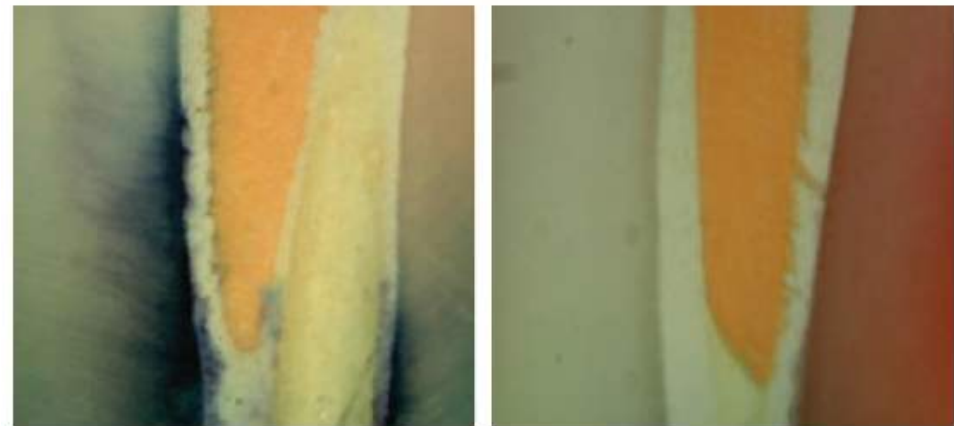
Sure-Seal Root™ Dentin

**Gap-free Seal**  
Interface between Dentin,  
Sure-Seal Root™ and  
Gutta percha

GP

SEM by Sure Dent Corporation

## Outstanding Microleakage Resistance



Dye penetration tested with Resin Sealer

No dye penetration tested with  
**Sure-Seal Root™**



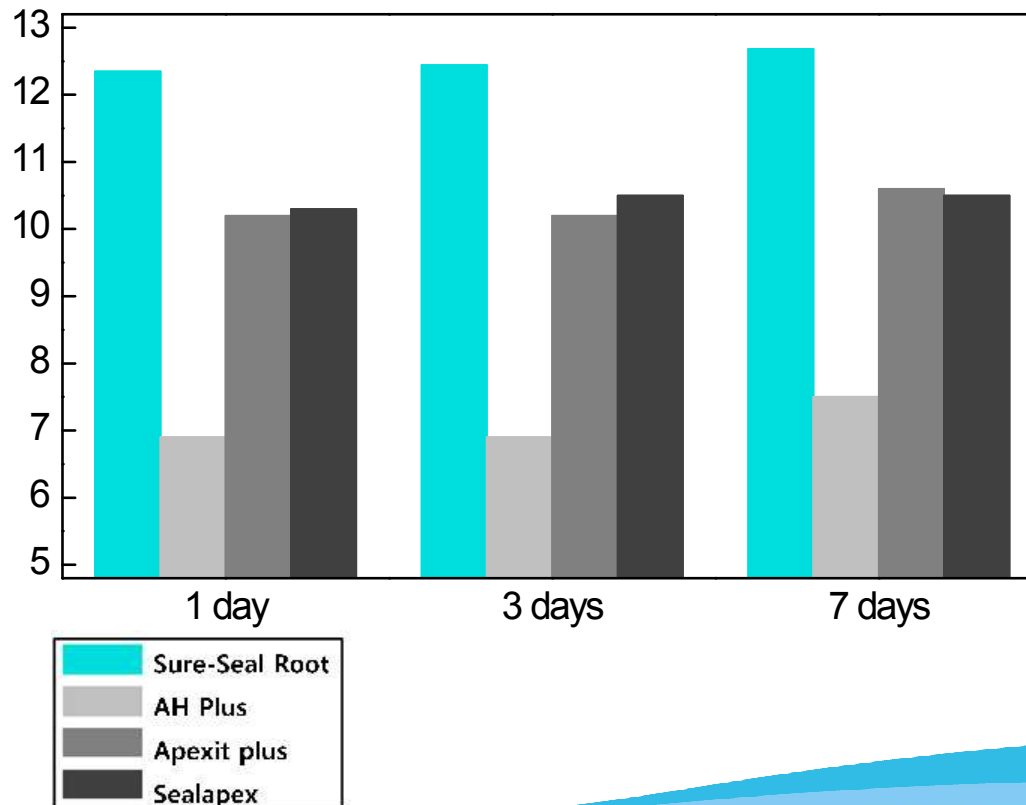
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## ▷ High pH

- Calcium hydroxide are generated during setting
- pH value increase 12 and over
- Alkaline environment making it highly antibacterial



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## ▷ Radiopacity



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# **Sure-Seal Root™** - Bioceramic Sealer

## ▷ **Biocompatible**

- High purity calcium silicates
- Resin-free
- Eugenol-free

## ▷ **Easy to use; No mixing, No working time**

- Sure-Seal Root is premixed injectable paste.
- It has optimum flowability.



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# **Sure-Seal Root™** - Bioceramic Sealer

**Thank you !**



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