

WHY BIOACTIVE BIO CERAMICS ARE THE FUTURE

NeoSEALER® Flo is a dimensionally stable, resin-free root canal sealer that promotes the formation of hydroxyapatite (HA) to support healing responses of the periapical tissues.

A simplified view of hydroxyapatite formation is shown below in two stages

1 HYDRATION

NeoSEALER® Flo
(TRI/DI CALCIUM SILICATE CEMENTS)



+

WATER FROM
SURROUNDING TISSUES



& CEMENT MATRIX
CALCIUM HYDROXIDE



Calcium hydroxide provides initial high pH for planktonic antimicrobial effects. The high pH supports the osteogenic response.

2 HYDROXYAPATITE (HA)

CALCIUM HYDROXIDE
 Ca^{2+} and OH^- ions

+

PHOSPHATE IONS FROM
SURROUNDING TISSUES



HYDROXYAPATITE (HA)



▲ Calcium phosphate precipitated crystals scattered on the hydrated tricalcium silicate cement surface.

BIOLOGICAL RESPONSE

1 When HA coats the surface, it hides the underlying MTA to minimize foreign body reactions and support healing responses of the pulpal or periapical tissue.

2 HA crystals fill gaps to support biological sealing.

3 HA supports the regrowth of tissues (cementum and periodontal ligaments).

