ProRoot® ES Endo Root Canal Sealer is a powder and liquid root canal sealer system. The combination of the powder and liquid creates a colloidal gel that solidifies to form a strong impermeable barrier to seal off pathways of communication between the root canal system and external surfaces of the tooth, offering the following features:

- Long-term sealing properties
- Dimensionally stable
- Adhesive properties
- High radiopacity
- Fine particle size powder

ProRoot® ES Endo Root Canal Sealer powder consists of fine, hydrophilic particles that set in the presence of the water-based liquid ProRoot® ES Endo Root Canal Sealer gel. The combination of the powder and liquid gel creates a colloidal gel that solidifies to form a strong impermeable barrier that fully sets in 12 hours and fully strengthens over four weeks.

INDICATIONS:
ProRoot® ES Endo Root Canal Sealer is for permanent sealing of root canals of teeth and may be used in combination with root canal obturation materials.

CONTRAINDICATIONS:
Hypersensitivity against caustic (high pH) solutions.

WARNINGS:
ProRoot® ES Endo Root Canal Sealer powder when mixed with the gel creates a high pH solution and is caustic.

- When overfilling occurs, the surrounding tissue normally tolerates the material very well. In case where larger amounts of material are pressed into the mandibular canal (inferior alveolar canal), immediate surgical removal of the material should be considered, as with all root canal materials according to state-of-the-art policy.

STORAGE:
- To be stored at temperatures below 27°C/80°F. Inadequate storage conditions will shorten the shelf life.
- The batch number which is required to identify the product, should be quoted in all correspondence.
- Do not use after expiration date.

INTERACTIONS WITH OTHER DENTAL MATERIALS:
Acid retards the setting of the material.

ADVERSE REACTIONS:
The following adverse reactions may occur:

- Reversible acute inflammation of the oral mucosa after contact with the unset paste.

STEP-BY-STEP INSTRUCTIONS:
1. Preparation of the root canal: Prior to application of ProRoot® ES Endo Root Canal Sealer, prepare and clean the root canals to be filled using state-of-the-art endodontic techniques. Dry the canal with paper points.

2. Mixing
   a. Dispense one pouch of powder on a glass slab or the chosen technique (paper point, file, or reamer) that is the size of the last instrument used during canal cleaning and shaping. A lentula may also be used in a rotary manner at slow speed (150-200 rpm). If using any alternative tool for sealer placement, select one that is at least one size smaller than the canal preparation. This method will be used to lightly coat the walls of the canal.
   b. If doing lateral compaction, the cone can also be coated with the sealer after placement of the sealer with the chosen technique (paper point, file, or reamer) if so desired.

3. ProRoot® ES Endo Root Canal Sealer is used in combination with root canal points. For filling techniques where most of the canal is obturated by endodontic point material, apply a light coating of ProRoot® ES Endo Root Canal Sealer to the canal walls.

4. Select a gutta-percha point (or alternatively a paper point, file, or reamer if using GuttaCore® Obturator) that is the size of the last instrument used during canal cleaning and shaping. A lentula may also be used in a rotary manner at slow speed (150-200 rpm). If using any alternative tool for sealer placement, select one that is at least one size smaller than the canal preparation. This method will be used to lightly coat the walls of the canal.
   a. If doing lateral compaction, the cone can also be coated with the sealer after placement of the sealer with the chosen technique (paper point, file, or reamer) if so desired.

5. Removal of root canal fillings: If ProRoot® ES Endo Root Canal Sealer is used in combination with a gutta-percha point, the root canal filling can be removed using standard techniques for gutta-percha.