# **Root Canal Sealer**

**Directions For Use** 

#### PULPDENT ROOT CANAL SEALER

Pulpdent Root Canal Sealer is a permanent root canal filling material that meets ANSI/ADA Specification No. 57-2000 for Endodontic Sealing Materials.

Pulpdent Root Canal Sealer is specially manufactured so that a thick mix can extrude through a 30-gauge needle and into irregularities and accessory canals for complete obturation of the root canal system using the Pressure Syringe technique. It is radiopaque, tissue compatible, bacteriostatic and insoluble in the root canal. The sealer sets in 2 - 3 hours, and it expands slightly upon setting to create a positive seal. Slight overfills often resorb in 10 - 12 months. After setting, the sealer can be drilled for a post, and it can be removed with gates glidden or peeso drills, if necessary. Pulpdent Root Canal Sealer resorbs with the roots of deciduous teeth and is recommended for use in both primary and permanent teeth. It can be used alone or in conjunction with gutta percha.

## **TECHNICAL DATA**

Powder ingredients: zinc oxide, calcium phosphate, zinc stearate and barium sulfate

Liquid ingredients: eugenol and Canada balsam

Standard: ANSI/ADA Specification No. 57-2000 for Endodontic Sealing Materials

#### **MIXING RATIO:**

**For use with Pressure Syringe:** a minimum of 3 level scoops powder : 3 drops liquid (or greater amounts in a ratio of 1:1)

For use with lentulo: 2 level scoops powder : 4 drops liquid (or greater amounts in a ratio of 1:2)

**Measuring Procedure:** Fluff powder by inverting bottle. Measure level scoops of powder. Do not pack powder into scoop. Hold sealer liquid bottle vertically downward when dispensing drops.

Working time: 30 minutes minimum

Setting Time: 2-3 hours

Storage: Store at normal room temperature (72 degrees F / 22 degrees C) away from direct sunlight.

## INSTRUCTIONS FOR USE WITH LENTULO TECHNIQUE

1. Mix 2 scoops powder with 4 drops liquid, or multiples thereof, and place in canal using a lentulo paste filler.

#### INSTRUCTIONS FOR USE WITH PULPDENT PRESSURE SYRINGE

- 1. Using good endodontic procedures, take a diagnostic x-ray with a radiopaque stop to determine the root length.
- 2. Open the canal to a size 35 or larger file to a distance 1-2 mm from the apex. Taper the canal walls to a funnel shape. Prepare the apical 1 2 mm with parallel walls. For completely formed teeth, it is best not to open the apex beyond a size 20-30 file.
- 3.Select a Pulpdent Pressure Syringe needle, place a radiopaque stop on it, and place the needle in the canal so that it wedges within 1-2 mm from the apex. A 30-gauge needle can be used if the apical 1–2 mm has not been opened beyond a size 20 file. Place the needle with a radiopaque stop back into the color plastic sheath.
- 4. Invert powder bottle to fluff powder. Maintaining a 1:1 ratio, dispense a minimum of 3 scoops of powder and 3 drops of liquid onto a mixing pad. For accurate measurement, level the scoop of powder with a spatula, but do not pack the powder.
- 5. Using a metal spatula, mix sealer to a creamy, putty-like consistency. The sealer should be pliable enough to form a homogeneous mass.

- 6. Remove the white cap from the Pressure Syringe needle and completely fill the hub of the needle with the thick mix of Pulpdent Root Canal Sealer. This can be easily done by using a spatula or plastic instrument or by placing the needle hub over the sealer and pressing it against the mixing pad. Pack tightly to eliminate air pockets.
- 7. Make sure the Pressure Syringe barrel and screw plunger are separated. Thread the needle onto the Pressure Syringe barrel and hand tighten. To place additional sealer in the Pressure Syringe, unscrew the needle, fill the hub again, and place it back on the Pressure Syringe.
- 8. Slip the handle onto the barrel so that it bends away from the patient's mouth, and insert the screw plunger into the barrel.
- 9. Remove the color plastic sheath from the Pressure Syringe needle. Slowly turn the screw plunger clockwise until sealer begins to extrude at the end of the needle.
- 10. Place the needle into the root canal 1-2 mm from the apex. It should wedge in the apical portion of the canal. The needle can be bent for easy access, but do not crimp the needle.
- 11. The screw plunger knob has four lines 90° apart indicating one-quarter turn. Turn the screw plunger one-quarter turn clockwise and wait 5 seconds. This fills the 1–2 mm at the apex. A radiograph can be taken at this time to check for a proper apical seal.
- 12. Before filling the remaining root canal space, withdraw the needle slightly to break contact with the canal walls. This assures that additional sealer will not be forced through the apex.
- 13. Continue to turn the screw plunger slowly until sealer flows into the access cavity.
- 14. Using a cotton plier, hold a cotton pellet in the access cavity against the side of the needle, and slowly withdraw the needle while continuing to turn the screw plunger. This will fill the space previously occupied by the needle. Use an instrument to force the cotton pellet into the canal to condense the sealer.
- 15. Remove and discard the needle. Empty the Pressure Syringe by turning the screw plunger clockwise as far as it can go.
- 16. Immediately after use, separate the screw plunger from the barrel by turning it counterclockwise. Use Wonder Orange Cleaning Solution to clean the screw plunger and barrel. A pipe cleaner can be used to help clean the inside of the barrel. When the Pressure Syringe is clean, the screw plunger should spin freely in the barrel. The Pressure Syringe can be autoclaved.

## **HELPFUL HINTS:**

- Pulpdent Root Canal Sealer is slow setting and allows ample time for cleaning the Pressure Syringe. <u>Do</u> not use zinc oxide and eugenol with the Pressure Syringe. It sets too fast.
- If Pulpdent Root Canal Sealer extrudes from the threaded areas at the needle hub or the back of the barrel, the sealer was not mixed o a thick enough consistency. The sealer should be mixed to a creamy, putty-like consistency for use with the Pressure Syringe.
- The most commonly used Pressure Syringe needle is 30 gauge. If the canal has been opened up to a 35-40 file, and the apical 1-2 mm have not been opened beyond a #20 file, you can usually use a 30-gauge needle.
- Clean the Pressure Syringe immediately after use. If the screw plunger is not removed from the barrel after use, the plunger and barrel will be permanently cemented together when the Root Canal Sealer sets.

