

# MTA

*fast-setting root canal repair material*

**IM3<sup>®</sup>**  
THE VETERINARY DENTAL COMPANY  
*For veterinary use only*

## **INDICATIONS**

iM3 MTA repair material is indicated for:

- retrograde filling of root canals after apicectomy
- root-end filling
- repair of root perforation
- repair of root resorption
- inducing apexification
- pulp capping after exposure or direct pulp covering after tooth pulpotomy

## **INSTRUCTIONS FOR USE**

iM3 MTA is to be mixed at room temperature between 18°C and 23°C (64°F and 73°F) humidity (50±10) %.

1. Dispense a single dose (0.25 g) of iM3 MTA onto a mixing pad.
2. Dispense two drops (approx. 0.10 g) of distilled water onto the pad, next to the powder.
3. Gradually mix small amounts of liquid with the powder, using a spatula.
4. Mix 30-40 seconds, to achieve a smooth paste.
5. Dispose of any remaining excess liquid.

The smooth paste should be used within 2-4 minutes. Hardening will occur in 12-15 minutes. When placed in the root canal, the material will completely harden in 4 to 24 hours.

If necessary a small amount (no more than 1 drop) of distilled water can be added to improve the flow of the mixture.

NOTE: Adding liquid will reduce the mechanical strength of the material.

### **Retrograde filling / Root end filling of root canals**

1. Access the root apex.
2. Perform apicectomy (root resection). Prepare a cavity for retrograde filling.
3. Mix iM3 MTA in accordance with instructions above.
4. Fill the cavity with paste. Use a small plugger, cotton pellets or paper points to pack the material into the preparation.
5. Remove excess material and clean the surface of the root with a moist piece of gauze.
6. Verify the correct position of iM3 MTA with a radiograph.
7. Complete the surgery using sutures and or a suitable dressing.

### **Repair of perforations**

1. Prepare the root canal using intracanal instruments and irrigate with sodium hypochlorite (NaOCl).
2. Dry the canals with absorbent paper points.
3. Mix iM3 MTA in accordance with the mixing instructions above.
4. Fill the canal space apical to the defect.
5. Apply iM3 MTA on the site of the defect. Pack the material tightly, using a small plugger, cotton pellets or paper points.
6. Verify the correct position of iM3 MTA with a radiograph. If all the spaces have not been completely filled, rinse the material out of the defect and repeat the procedure.
7. Perform the obturation of the rest of the canal, isolate it with rubber dam and restore the crown.

### **Repair of resorption**

1. Access the resorbed area and prepare it, using endodontic instruments.
2. Mix iM3 MTA in accordance with the mixing instructions above.
3. Apply iM3 MTA on the site of the defect. Pack the material tightly, using a small plugger, cotton pellets or paper points.
4. Verify the correct position of iM3 MTA with a radiograph. If all the spaces have not been completely filled, rinse the material out of the defect and repeat the procedure.
5. Isolate using a glass-ionomer cement and restore the crown.

### Apexification

1. Prepare the root canal using endodontic instruments and irrigate with sodium hypochlorite (NaOCl).
2. Dry the canals with absorbent paper points.
3. Mix iM3 MTA in accordance with the mixing instructions provided.
4. Apply iM3 MTA on apical area of the canal. Pack the paste into apical area, use gutta-percha and paper points to fill the apical area. Use suitable endodontic instruments to reach to the apical foramen.
5. Verify the correct position of iM3 MTA with a radiograph. If all the spaces have not been completely filled, rinse the material out of the defect and repeat the procedure.
6. Perform the obturation of the rest of the canal, isolate it with rubber dam and restore the crown.

### Pulp capping

1. Prepare the cavity, under constant water cooling.
2. Remove carious material using a round bur or a hand excavator.
3. Rinse the cavity with (2.6 - 5.0) % NaOCl. In the case of heavy bleeding, use a cotton pellet moistened with NaOCl.
4. Mix iM3 MTA in accordance with the mixing instructions provided.
5. Apply a small amount of iM3 MTA, using a small ball applicator.
6. Dry with a cotton pellet.
7. Cover with a small amount of glass-ionomer liner and cure in accordance with its instructions.
8. Etch the remaining cavity walls. Rinse thoroughly.
9. Carefully dry the cavity, leaving the surface slightly moist.
10. Apply bonding material and cure in accordance with instructions.
11. Finish the restoration with composite.
12. Check, using radiographs every three to six months or as needed.

### Direct pulp covering after tooth pulpotomy

1. Prepare the cavity, etch and dry.
2. Mix iM3 MTA in accordance with the mixing instructions provided.
3. Apply a small amount of the product on the prepared surface, using a suitable applicator.
4. Dress, using a temporary filling material for at least four hours (or until the next appointment).
5. Remove the temporary restoration after four hours, or at the next appointment, and examine iM3 MTA - if the material has not completely hardened, rinse and repeat the application.
6. Perform the obturation of the rest of the canal, isolate it with glass-ionomer cement and restore the crown.

### COMPOSITION

iM3 MTA contains calcium oxide, silicon oxide, aluminium oxide and zirconia oxide.

### LIMITATIONS IN USAGE, INTERACTIONS

Do not use iM3 MTA in patients with a known allergy to any of the ingredients. In case of any symptoms, stop using iM3 MTA and consult a medical professional and/or a veterinary specialist giving information about the product.

### ADDITIONAL INFORMATION

The ratio of oxides in a powder determines its time of hardening. During the hardening calcium oxide, is hydrated by the distilled water, forming calcium hydroxide, ensuring high alkalinity (pH 12.8). The amorphous calcium hydroxide, reacts with the oxides of silicon and aluminium, forming active silicates, strengthening the cement. The alkaline cement has anti-bacterial properties, stimulates the formation of secondary dentin and stops dehydration of the hard tissues. iM3 MTA is formulated for use in the oral environment with a temperature range of between 32°C and 42°C (90°F and 107°F) and humidity of (60-90) %. The product exhibits high biocompatibility, slight solubility and high mechanical resistance.

### STORAGE

Store at a temperature between 5°C and 25°C (41°F and 77°F). Keep dry.

### CONTRAINDICATIONS AND WARNINGS

Avoid contact of the powder with the air. Keep out of reach of children. Do not use after the expiry date. For use by veterinarians only. Shelf life: 3 years from manufacture date.

### WARRANTY

iM3 will replace products that have been proved to be defective or will refund the price of purchase. iM3 is not liable for any loss or damage caused by misuse or improper use of the product.

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**THE VETERINARY DENTAL COMPANY**  
USA (800) 664 6348 info@im3usa.com  
Australia +61 2 9420 5766 sales@im3vet.com  
Ireland +353 (0)1 6911277 sales@im3dental.com

