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## INSTRUCTION FOR USE

### MTA Forte

#### (MTA – Root Repair Material)

Prevalent MTA Forte is a biocompatible mineral trioxide aggregate root repair material intended for endodontic and restorative dental procedures. The material is supplied as a powder and liquid system that forms a workable paste when mixed. After placement, MTA Forte sets in the presence of moisture and forms a hard, alkaline structure that supports sealing ability and biological repair.

#### COMPOSITION

**Powder:** Tricalcium Silicate, Dicalcium Silicate, Tricalcium Aluminate, Zirconium Oxide

**Liquid:** Calcium Chloride in Purified Water

MTA Forte is a calcium silicate-based bioactive material that sets in the presence of moisture to form a strong, alkaline, biocompatible structure.

#### INTENDED USE

Root filling, Repair of root perforations, Pulp capping, Apexification

#### INDICATIONS FOR USE

Dental procedures that contact vital pulp tissue:

- Pulp capping
- Cavity lining
- Pulpotomies

Dental procedures that contact periradicular tissues:

- Root-end filling
- Apexification
- Perforation repair
- Root resorption
- Sealing
- Obturation (pulpectomy)

#### WORKING & SETTING TIME

- Working time: approximately 4–6 minutes depending on environmental conditions.
- Initial setting time: approximately 15–18 minutes.
- Final setting occurs in the presence of moisture.

#### INSTRUCTIONS FOR USE

Dosage and Mixing

1. Dispense 1 scoop of powder onto a glass slab or non-absorbent mixing pad.
2. Dispense one small drop of MTA Forte Liquid.
3. Gradually incorporate the liquid into the powder until a putty-like consistency is achieved. For certain procedures, a thinner, syrupy, stringy consistency may be preferred. Mix thoroughly to fully hydrate the powder.
4. If the material is not used immediately, cover the mixed material with a moist sterile gauze sponge or clean cover to prevent evaporation. Additional gel or liquid may be used to rewet the powder before it sets.

#### DETAILED PROCEDURAL INSTRUCTIONS

##### A. Pulp Capping, Pulpotomy, or Cavity Liner/Base

Complete cavity preparation under rubber dam

isolation using a high-speed bur with constant water cooling.

Excavate all carious tooth structure using a slow-speed round bur or hand instruments.

##### For Pulpotomy:

- Remove the roof of the pulp chamber and all coronal pulp tissue to the level of the canal orifices in multi-rooted teeth.
- In single-rooted teeth, remove pulp to the level of the cemento-enamel junction or slightly below.

##### For Pulp Exposure or Pulpotomy:

- Gently rinse the exposure with saline.
- Control hemorrhage using a cotton pellet moistened with saline, dilute NaOCl (0.5–1.0%), or a mild hemostatic agent

##### For Base/Liner, Pulp Exposure, or Pulpotomy:

- Wipe the cavity with chlorhexidine solution.
- Apply mixed MTA Forte over the pulp exposure or floor of the cavity using a small applicator.
- Remove excess material with a dry cotton pellet and rinse gently.
- Place glass ionomer or composite over the MTA Forte. Glass ionomer should serve as an interim restoration prior to a final restoration.
- Assess pulp vitality at three-month intervals or as needed, and confirm with a radiograph.

##### B. Root Apexification, Resorption, or Perforation Repair

- Debride, clean, and shape the root canal system under rubber dam isolation.
- Rinse the canal with NaOCl solution (3.0–6.0%).

##### For Apexification:

- Dry the canal with paper points, avoiding extension beyond a wide-open apex.
- Gently compact MTA Forte in the apical region to create a 3–5 mm apical barrier.
- Confirm placement with a radiograph and rinse gently.
- Apply approximately 2 mm of glass ionomer, acid-etch, and place composite.

##### For Resorption or Perforations:

- Isolate the resorptive defect or perforation site.
- Obtainate the canal space apical to the defect.
- Dispense MTA Forte into the defect.
- Compact gently using a small amalgam plugger, cotton pellet, or paper points.
- Confirm placement radiographically and rinse gently.
- Once the material is firm (a few minutes), obturate the remaining canal and close the coronal access as usual.

##### C. Root-End Filling

- Surgically access the root-end and resect 2–4 mm of the apex using a surgical bur.
- Prepare a Class I root-end cavity 3–5 mm deep using an ultrasonic tip.
- Isolate the area, achieve hemostasis, and dry

thoroughly.

- Compress MTA Forte into the root-end cavity using a plastic instrument or small carrier.
- Remove excess material and clean the root tip with a slightly moist cotton pellet.
- Rinse gently.
- Confirm placement with a radiograph.
- Close the surgical site.

##### D. Sealing & Obturation of Root Canals

⚠ DO NOT overfill the root canals. If a large amount of material is overfilled into the mandibular (inferior alveolar) canal, immediate surgical removal should be considered, in accordance with current clinical standards.

- Debride, clean, and shape the canal system under rubber dam isolation.
- Rinse with NaOCl solution (3.0–6.0%).
- Dry the canal with paper points.
- For complete obturation: Gently compact MTA Forte into the canal and confirm placement with a radiograph.
- For point-based techniques: Apply a light coating of MTA Forte (mixed to a syrupy, stringy consistency) to the canal walls.

##### Observe the following:

Avoid air bubble formation.

Do not use a pumping action.

Avoid overfilling.

Minimize material extension beyond the apex.

- Coat disinfected, dried obturation points with MTA Forte and insert into the canal.
- Confirm complete placement radiographically.
- The dispensed material must not be returned to the container. Any dose once applied must not be reused.

##### WARNINGS

MTA Forte powder is caustic, as are all calcium silicates.

##### PRECAUTIONS

- Avoid contact of unset mixed paste with skin or oral mucosa. After incidental contact, wash and rinse with water.
- Wear suitable gloves and protective eyewear during use.
- Keep powder and gel well sealed.
- Protect powder from humidity; close the container after use.
- Do not contaminate powder with an unclean or moist instrument.
- Do not overfill root canals during obturation or sealing.

##### ADVERSE REACTIONS

- Reversible acute inflammation of the oral mucosa may occur if contacted with the unset paste.

##### INTERACTIONS WITH OTHER DENTAL MATERIALS

- Unknown.

##### CONTRAINDICATIONS

- Hypersensitivity to caustic (high pH) solutions.

##### PRESENTATION

Ref: PL-0162- MTA Forte- 1g Powder, 2ml Liquid, Spoon, Mixing Pad

##### STORAGE CONDITIONS

- Store between 10°C (50°F) and 24°C (75°F).
- Close the cap carefully after every use.
- Keep away from moisture.
- Shelf life is not affected after opening if stored in a cool, dry place.

##### SHELF LIFE

3 years from the date of manufacture.

##### DISPOSAL

Dispose of product contents and packaging according to local regulations and applicable country-specific requirements.

##### CONTACT

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Failure to comply with the specified storage conditions may alter the working characteristics of the material and reduce its shelf life.

The manufacturer is not responsible for any loss of quality resulting from non-compliance with the specified conditions for transportation, storage, and use of this product. The user assumes full responsibility for using the material for any purposes other than those specified by the manufacturer. This material is intended solely for professional dental use. Application must be carried out strictly according to the instructions for use. The manufacturer accepts no liability for damages resulting from failure to follow the provided instructions or for use beyond the stipulated applications. The user is responsible for assessing the material's suitability for any purpose not explicitly stated in this instruction sheet. The descriptions and data provided do not constitute a warranty of attributes and are not legally binding.

**This product is specially formulated for use in dentistry and to be used by qualified dental personnel**

Symbol for "TEMPERATURE LIMITATION" Symbol for "KEEP DRY"

Symbol for "KEEP OUT OF THE REACH OF CHILDREN"

Symbol for "DO NOT USE IF PACKAGE IS DAMAGE"

Symbol for "KEEP AWAY FROM SUNLIGHT"

Symbol for "MANUFACTURER NAME & ADDRESS"

Symbol for "CONSULT INSTRUCTION FOR USE"

Symbol for "CATALOGUE NUMBER"

Symbol for "MEDICAL DEVICE"

Symbol for "NON STERILE" Symbol for "USE BY"

Symbol for "BATCH CODE" Symbol for "CAUTION"

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