

For the Confidence of 4 Million Successful Cases,
**TRUST THE FIRST NAME
IN ROOT REPAIR**

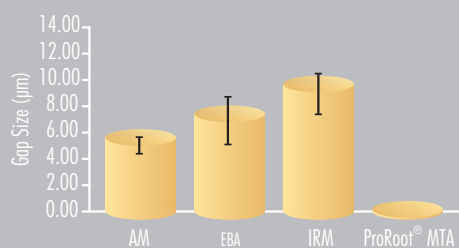


There's Only One Original

When it comes to root repair, trust the original MTA. ProRoot® MTA is compositionally formulated to have the physical properties, setting requirements and characteristics necessary for a clinically effective root repair material. It creates an excellent seal that promotes a normal healing response within the root so you can have confidence that your procedure will succeed, and fewer retreatment procedures will be necessary. And its ease of manipulation allows you to tailor its consistency to suit your clinical needs. One use of ProRoot MTA and it's clear why countless clinicians still trust the first name in root repair.

Proven by Scientific Research

Mean Gaps (μm) Between Root-End Filling Materials and Dentinal Walls (Using Resin Replicas)



AM = Amalgam IRM = Intermediate Restorative Material

As this chart shows, root repairs with ProRoot MTA result in smaller root gap between the root-end filling material and the dentinal wall.⁶

To reduce the risk of bacterial infection, you need a root repair material that seals off pathways of communication between the root canal system and surrounding tissue. ProRoot® MTA outperforms other materials in this area by creating a stable barrier to bacterial and fluid leakage.

In dye leakage experiments, ProRoot MTA has been shown to allow significantly less dye leakage and have better marginal adaptation than other materials including Amalgam, Super EBA cement and Intermediate Restorative Material.^{1,2} Several studies also demonstrated that ProRoot MTA allowed less bacterial migration compared to other root repair materials.^{3,4}

Biocompatible for a good clinical response.

ProRoot MTA exhibits excellent biocompatibility in communication with vital tissues.⁴ This allows for a normal healing response that even stimulates the formation of new cementum over the restored root interface.^{1,5}

Median Time of Bacterial Leakage of Various Root-End Filling Materials.⁷

Material	Number of Days
Amalgam	28.5
Super EBA	34.5
IRM	15.0
ProRoot® MTA	90.0

The median time of bacterial leakage was far greater in root repairs performed with ProRoot MTA than with using other materials.^{2,4}

Sets in the presence of moisture.

The water-based chemistry of ProRoot MTA renders moisture contamination a non-issue. In the clinical environment where complete removal of moisture is not always possible, a material that sets in the presence of moisture is necessary to avoid contamination and achieve long-term clinical success.

¹ Parirokh M, Torabinejad M. Mineral trioxide aggregate: a comprehensive literature review - Part III: clinical applications, drawbacks, and mechanism of action. *J Endod* 2010;36:400-413.

² Tanomaru-Filho M, Guerreiro-Tanomaru JM. Properties of hydrated mineral trioxide aggregate. In Camilleri J ed, *Mineral Trioxide Aggregate in Dentistry*, Springer-Verlag, Heidelberg, 2014.

³ Torabinejad M, Lemon R. Use of MTA as root perforation repair. In Torabinejad, M. *Mineral Trioxide Aggregate: Properties and Clinical Applications*. Wiley Blackwell, Ames, Iowa 2014.

⁴ Torabinejad M, Parirokh M. Mineral trioxide aggregate: a comprehensive literature review - Part II: leakage and biocompatibility investigations. *J Endod* 2010;36:190-202.

⁵ Camilleri J, Pitt Ford TR. Mineral trioxide aggregate: a review of the constituents and biological properties of the material. *Int Endod J* 2006; 39: 747-754.

⁶ Torabinejad M, Smith P, Kettering J, Pitt Ford T. R. "Comparative Investigation of Marginal Adaptation of Mineral Trioxide Aggregate and Other Commonly Used Root-End Filling Materials," *J Endod* 1995; 21: 295-299.

⁷ Torabinejad M, Rastegar A.F, Kettering J.D, Pitt Ford T.R, Bacterial Leakage of Mineral Trioxide Aggregate as Root-End Filling Material. *J Endod* 1995; 21: 109-112.

⁸ Nair PNR, Duncan HF, Pitt Ford TR, Luder HU. Histological, ultrastructural and quantitative investigations on the response of healthy human pulps to experimental capping with mineral trioxide aggregate: a randomized controlled trial. *Int Endod J* 2008;41:128-150.

⁹ Zhaofei L, Cao L, Fan M, Xu Q. Direct pulp capping with calcium hydroxide or mineral trioxide aggregate: a meta-analysis. *J Endod* 2015;41:1412-1417.

¹⁰ Sushynski JM et al. Comparison of gray mineral trioxide aggregate and diluted formocresol in pulp-tomized primary molars: a 6- to 24-month observation. *Pediatric Dent* 2012;34:e120-e128.

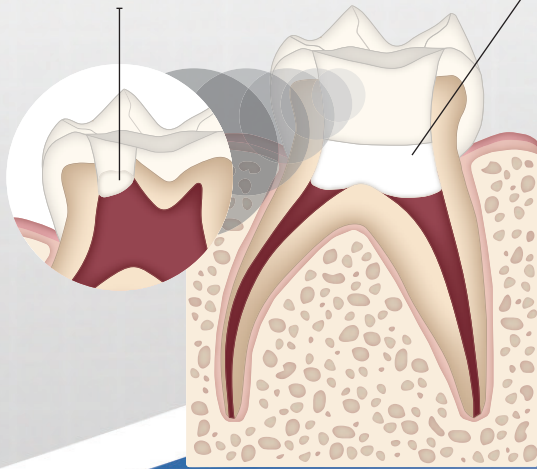
¹¹ Srinivasan V, Waterhouse P, Whitworth J. Mineral trioxide aggregate in paediatric dentistry. *Int J Pediatric Dent* 2009;19:34-47.

Indicated Uses for ProRoot® MTA

Because of its unique features and benefits, ProRoot MTA offers distinct advantages over other materials for these root canal repair procedures in primary and permanent teeth.

Pulp Capping

Clinical research indicates that ProRoot MTA is an effective pulp capping material.^{8,9} When gently placed over the pulpal exposure site, it creates a biocompatible sealing of the pulp. The no shadow formula is the ideal shade for this procedure.

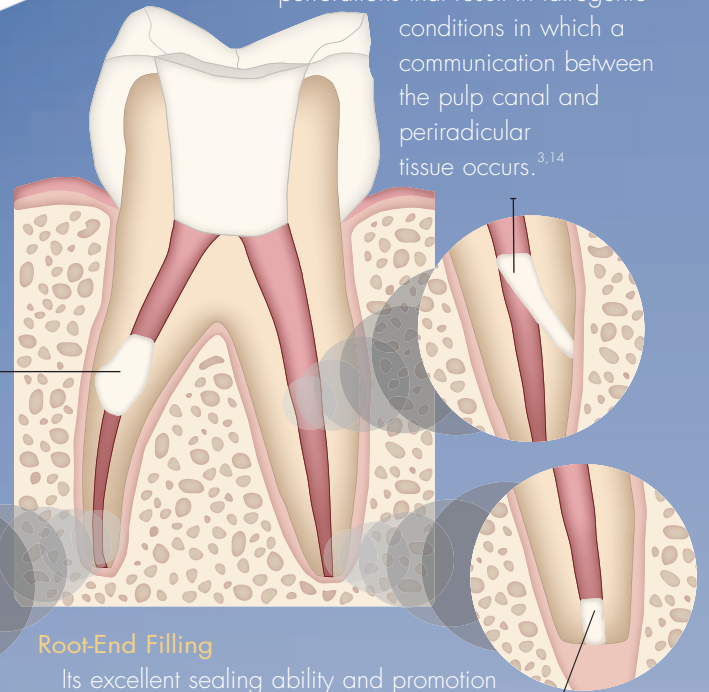


Now Cleared for Pediatric Pulpotomies

In addition to the numerous ways ProRoot MTA has helped to repair roots for years, the material is now cleared by the FDA for use in pediatric pulpotomy cases.^{10,11,12,13} Because ProRoot MTA creates a biocompatible seal, it is ideal for replacing pulp in the chamber to prevent infection from reaching the roots.

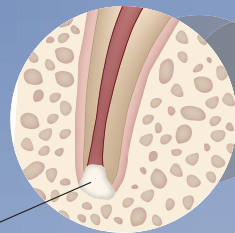
Repair of Root Perforations

ProRoot MTA is ideal for repairing perforations that result in iatrogenic conditions in which a communication between the pulp canal and periradicular tissue occurs.^{3,14}



Repair of Root Resorption

Internal root resorption can result in the breakdown of root structure.³ ProRoot MTA seals the resorptive defect to prevent further destruction.



Apexification

ProRoot MTA creates a permanent apical plug at the outset of treatment, so no interim procedures are needed, making it an excellent material for apexification.¹⁵

Root-End Filling

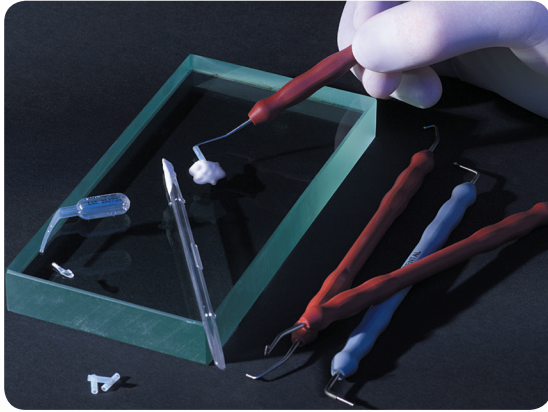
Its excellent sealing ability and promotion of periradicular healing make ProRoot MTA ideal as a root-end filling material. Studies show it has a good clinical response and successful outcome for this use.^{1,14}

¹²Cardoso-Silva C, Barbería E, Maroto M, García-Godoy F. Clinical study of Mineral Trioxide Aggregate in primary molars. Comparison between grey and white MTA - a long term follow-up (84 months). *J Dent* 2011;39:187-193.

¹³Holan G, Eidelman E, Fuks AB. Mineral trioxide aggregate in primary molar pulpotomies. *Pediatr Dent* 2005;27:129-136.

¹⁴Gandolfi MG, Taddei P, Tinti A, Prati C. Apatite-forming ability (bioactivity) of ProRoot MTA. *Int Endod J* 2010;43:917-929.

¹⁵Alhaddad Alhamoui F, Steffen H, Splieth CH. The sealing ability of ProRoot MTA when placed as an apical barrier using three different techniques: an in-vitro apexification model. *Quintessence Int* 2014;45:821-827.



ProRoot MTA material being mixed on pad.

The Right Mix, Every Time

Each packet of ProRoot® MTA comes with a premeasured unit dose of purified water for fast preparation. Once the material is mixed, it quickly reaches a working consistency for efficient application.

Try out ProRoot MTA with the ProRoot MTA Delivery System that makes achieving the material's predictable results even faster and easier with improved material handling and more precise placement.

The Proof is the Pictures

These radiographs show a strip perforation in a lower molar successfully treated with ProRoot MTA. Figure A shows the canal before treatment; Figure B depicts the same canal after two years. The lower molar mesial root furcal perforation was repaired with ProRoot MTA demonstrating a dense, well-contoured repair with excellent healing and near normal appearance after two years.



Figure A

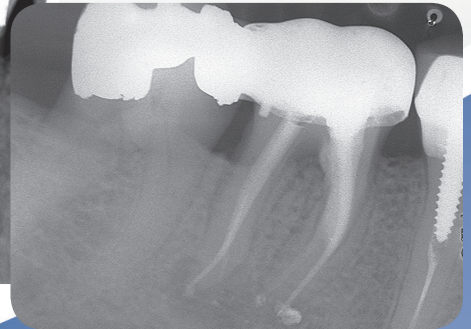


Figure B

Order Information

ProRoot MTA is available in 2 shades (white and gray) and in 1/2-Gram and 1-Gram size treatment boxes so you can choose just the right product for your needs. For more product information or to place an order call our customer service specialists at 1-800-662-1202 or visit us online at www.tulsadentalspecialties.com.

Product	SKU #
ProRoot® MTA White Delivery System <i>(Contents include: 5 1-gram treatments of ProRoot MTA material, 6 ampoules ProRoot MTA water, 6 mixing sticks, 4 carriers (1 nonsurgical, 3 surgical), 10 carrier sleeves, 1 Instructional DVD, 1 Tip Card)</i>	PRMANSYSVW
ProRoot® MTA 1/2-Gram Refill Kit – White (4 1/2-Gram Treatments)	PROROOT2VW
ProRoot® MTA 1/2-Gram Refill Kit – White (10 1/2-Gram Treatments)	PROROOT5VW
ProRoot® MTA 1-Gram Refill Kit – White (5 1-Gram Treatments)	PRCEMW
ProRoot® MTA 1-Gram Refill Kit – Gray (5 1-Gram Treatments)	PRCEM
ProRoot® MTA Manual Carrier – Surgical Center	PRMSURC
ProRoot® MTA Manual Carrier – Surgical Left	PRMSURL
ProRoot® MTA Manual Carrier – Surgical Right	PRMSURR
ProRoot® MTA Manual Carrier – Nonsurgical	PRMNS
ProRoot® MTA Carrier Sleeves (50-pack)	PRSENS8



1-800-662-1202

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