

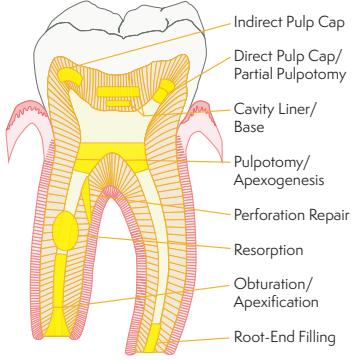
FREQUENTLY ASKED QUESTIONS



NeoPUTTY®

FAQ – NeoPUTTY® ROOT & PULP TREATMENT MATERIAL

<p>What is NeoPUTTY®?</p>	<p>NeoPUTTY is a premixed bioactive bioceramic root & pulp treatment consisting of an extremely fine, inorganic powder of tricalcium/dicalcium silicate in a water-free organic liquid. The product is packaged ready-to-use. No mixing is required. NeoPUTTY is designed to set in vivo in the presence of moisture from the surrounding tissues.</p>
<p>How does NeoPUTTY® set?</p>	<ul style="list-style-type: none"> • NeoPUTTY is formulated with a water-free organic liquid. NeoPUTTY only sets in vivo or moisture. Setting begins in the presence of moisture from the apical tissues, dentinal tubules, or pulp. • NeoPUTTY is different from our NeoMTA® 2, which is packaged as a powder and a gel and requires mixing. NeoMTA 2 begins setting when the powder and gel are mixed and continues in vivo.
<p>What do you mean by wash-out resistance and is Avalon Biomed NeoPUTTY® immediately wash-out resistant?</p>	<p>One important characteristic that affects the performance of MTA-type products is its stability when placed in a tooth. We test product stability through wash-out testing. NeoPUTTY is immediately wash-out resistant. You can gently rinse and complete the restoration or cement a crown, immediately after placing NeoPUTTY.</p>
<p>What is the difference between NeoMTA® 2 and NeoPUTTY®?</p>	<ul style="list-style-type: none"> • NeoPUTTY does not need mixing – it is a uniform, firm, low-tack putty from beginning to end with no dry out between uses. • NeoPUTTY has about 25% higher radiopacity than NeoMTA 2 (8.1 vs 6.5 mm equivalent aluminum). • NeoPUTTY syringes have zero waste – the syringes allow efficient unit-dose dispensing to the end of the syringe which has a positive placement plunger tip. • NeoMTA 2 is a Powder/Gel hand-mix product designed for 13 vital pulp and endodontic uses, including obturation and sealing (<i>refer to NeoMTA 2 IFU</i>).
<p>What are the similarities between NeoMTA® 2 and NeoPUTTY®?</p>	<ul style="list-style-type: none"> • Both products are bioactive bioceramic MTAs. • Both products release calcium and hydroxide ions promoting the formation of hydroxyapatite from the surface to seal and support healing. • Both products are resin-free for maximum bioactivity. • Both products have initially high pH (alkaline/basic) when applied. Literature has shown such products to be antimicrobial in-vitro¹. • Both products are color stable, non-staining, containing tantalum oxide (tantalite) for radiopacity. Neither NeoMTA 2 or NeoPUTTY contain bismuth oxide, which causes tooth discoloration². • Both products are immediately wash-out resistant when placed. • Both products have low water solubility (<3%) when set. • Both products are dimensionally stable with negligible expansion on setting. • Both products contain extremely fine, hydraulic tri/dicalcium silicate powders. <p>¹The anti-microbial effect against enterococcus faecalis and the compressive strength of two types of mineral trioxide aggregate mixed with sterile water or 2% chlorhexidine liquid. Holt DM, Watts JD, Beeson TJ, Kirkpatrick TC, Rutledge RE. J Endod. 2007 Jul;33(7):844-7.</p> <p>²Marciano MA, Duarte MA, Camilleri J. Dental discoloration caused by bismuth oxide in MTA in the presence of sodium hypochlorite. Clin Oral Investig. 2015;19(9):2201-2209.</p>

<p>What are the indications for use for NeoPUTTY®?</p>	<p>There are 12 indications for use. Read IFU prior to use, available at Avalon Biomed.com</p> 
<p>What makes NeoPUTTY® different from resin-based materials that contain some MTA?</p>	<p>Unlike inert, resin-based materials containing some MTA...</p> <p>NeoPUTTY is</p> <ul style="list-style-type: none"> • Bioactive; NeoPUTTY releases calcium and hydroxide ions from the surface, promoting the formation of hydroxyapatite to ensure bioactive sealing. • Formulated with pure tri/dicalcium silicate powder and a radiopacifier. • Dimensionally stable – unlike resin-based materials that shrink. • Biocompatible, non-cytotoxic. • More versatile, having more treatment indications. • More radiopaque. • Resin-free for maximum MTA concentration and maximum bioactivity. [Resin-based materials containing only some MTA-type cement have not consistently shown biocompatibility in cell cultures^{3,4}, demonstrating a toxicity that may be attributed to incomplete resin curing.] <p>³Adigüzel M, Ahmetoğlu F, Eldeniz AÜ, Tekin MG, Gögebakan B. Comparison of cytotoxic effects of calcium silicate-based materials on human pulp fibroblasts Mehmet. J Dent Res Dent Clin Dent Prospects. 2019;13(4):241-246.</p> <p>⁴Collado-González M, García-Bernal D, Oñate-Sánchez RE, et al. Cytotoxicity and bioactivity of various pulpotomy materials on stem cells from human exfoliated primary teeth. Int Endod J. 2017;50 Suppl 2:e19-e30.</p>
<p>Are all white MTAs non-staining?</p>	<p>NO. White MTAs that contain bismuth oxide as the radiopacifier (e.g. ProRoot White MTA) will cause staining. NeoPUTTY is non-staining because it contains tantalite as the radiopacifier, which does not cause staining.</p>
<p>Is Avalon Biomed NeoPUTTY® the same as Portland cement?</p>	<p>NO. While both Portland cement and MTA contain tricalcium silicate, they are not the same. Portland cement is:</p> <ul style="list-style-type: none"> • An impure industrial grade construction product • A coarse powder that sets slowly • NOT a medical device • NOT cleared by the FDA • NOT radiopaque • NOT a highly refined powder <p>Portland cement cannot meet the international dental standards, including ISO 6876, ISO 9917-1 or ADA 57 requirements. All Avalon Biomed MTA-based products, including NeoPUTTY, meet all dental quality standards and are manufactured in Houston, TX USA in an FDA-registered factory certified to ISO 13485.</p>
<p>How radiopaque is Avalon Biomed NeoPUTTY®?</p>	<p>Avalon Biomed NeoPUTTY has the highest radiopacity in its class with 8.1 mm Al equivalent.</p>

DOSE INFORMATION

What kit sizes are available?	NeoPUTTY Starter Kit 0.65 gm and NeoPUTTY Professional Kit 1.2 gm						
How many cases can I treat with each kit?	The dose size varies depending on the treatment. Below is an estimate using a dose size of 0.075 gm, which is the typical dose size for a Anterior Pulpotomy. <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Kit Size (gm)</th> <th># of Doses</th> </tr> </thead> <tbody> <tr> <td>0.65</td> <td>9</td> </tr> <tr> <td>1.2</td> <td>16</td> </tr> </tbody> </table>	Kit Size (gm)	# of Doses	0.65	9	1.2	16
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APPLICATION, WORKING & SETTING TIME; COMPLETING THE RESTORATION

How much NeoPUTTY® do I need to apply to ensure its effectiveness?	<ul style="list-style-type: none"> • For a pulpotomy, liner, base or pulp cap, apply a layer at least 1.5 mm thick. • For root apexification gently compact the NeoPUTTY in the apical region to create a 3 to 5 mm thick apical barrier.
Does NeoPUTTY® come with an applicator tip?	NO. NeoPUTTY kits do not include tips. Express the desired amount of NeoPUTTY on a pad. Use the instrument of your choice to deliver the putty to the treatment site. You may also use a syringe tip of your choice to dispense or apply NeoPUTTY directly, remembering this is a very thick paste. Immediately recap the syringe and replace in its protective aluminum container after each use.
What is the best instrument to use to place NeoPUTTY® into the pulp chamber when performing a pulpotomy?	We recommend placing NeoPUTTY with a plastics instrument, Hollenbach instrument, amalgam carrier, or an MTA carrier. The material can be <i>gently</i> spread with a moist cotton pellet, amalgam plugger, or ball burnisher.
What is the best instrument to place NeoPUTTY® for surgical procedures such as root-end filling, apexification or perforation repair?	Use any convenient instrument, to deliver a small cone or cylinder of NeoPUTTY to the site. A Messing gun, amalgam carrier, Dovgan MTA carrier, or the MAP™ system may be used. Reversed paper points or gutta percha points can guide the putty in the root to the apex for apexification.
What is the working time of NeoPUTTY®?	Working time at room temperature is >1 hr. Unlike NeoMTA 2, NeoPUTTY is formulated with a water-free organic liquid. When applied, it requires moisture from the apical tissues, dentinal tubules or pulp tissue to set.
What is the setting time of NeoPUTTY®?	NeoPUTTY will set in vivo in about 4 hrs. Setting begins in the presence of moisture from the apical tissues, dentinal tubules or pulp tissue. NOTE: <i>To prevent premature hardening of NeoPUTTY, immediately recap after each use.</i>
Should I secure the NeoPUTTY® prior to restoration?	It's not required but a quick and easy method is to apply a layer of a flowable composite, light-cure glass ionomer, RMGI, IRM®, ZOE or any other restorative material over the NeoPUTTY prior to the final tooth restoration. If you use a flowable composite that requires etching, etch the tooth, not the NeoPUTTY, then proceed with the restoration.
Can I place NeoPUTTY® and complete the restoration before it is completely set?	YES. You can complete the restoration or cement a crown immediately after placing NeoPUTTY. NeoPUTTY will harden/set underneath the restoration. NeoPUTTY is immediately wash-out resistant and dimensionally stable when placed with zero shrinkage and negligible expansion to ensure gap-free sealing.

CLEANUP AND STORAGE

<p>What is the shelf life of NeoPUTTY®?</p>	<ul style="list-style-type: none"> • The product has a 3-year shelf life. • NeoPUTTY must be kept well sealed to prevent hardening. • Immediately recap after each use. • To protect against moisture intrusion, store NeoPUTTY in its protective aluminum container.
<p>Should I refrigerate NeoPUTTY®?</p>	<p>NO. Store and use at room temperature (DO NOT REFRIGERATE).</p>

OTHER

<p>Does Avalon Biomed sell any other bioactive bioceramic MTA products?</p>	<p>YES. Avalon Biomed also manufactures NeoSEALER Flo®, a premixed bioactive bioceramic root canal sealer paste packaged in a syringe.</p>
<p>Does Avalon Biomed sell a light-curing MTA product?</p>	<ul style="list-style-type: none"> • Avalon Biomed does not manufacture a light-curing MTA. We prefer to maximize the concentration of bioactive powders in Avalon Biomed products and deliver them in a formula that allows the bioactive powders to readily hydrate and form Ca(OH)₂ for hydroxyapatite formation⁵. • Light-curable and dual-cure MTA products contain resins which dilute and inhibit the MTA's bioactivity. • Resins never cure 100%. Uncured resin leaves cytotoxic monomers in the MTA-resin matrix and in contact with the pulp. • Resins shrink during curing; they are not dimensionally stable. Avalon Biomed bioactive cements (MTAs) expand very slightly to ensure sealing. <p><small>⁵Formosa L M, Mallia B, Camilleri J The chemical properties of light and chemical curing composite with mineral trioxide aggregate filler. Dent Mater. 2013 Feb;29(2):e11-9.</small></p>