

RapidCore™ MiniMix™ (Centrix Dental)
(Project 2008-024) (1/10)



RapidCore™ MiniMix™ is a unit-dose, unique delivery system version of the RapidCore™ resin composite core material that is dispensed from either 25- or 50-milliliter cartridges. Like RapidCore®, RapidCore™ MiniMix™ uses a mixing tip to prepare the material allowing direct delivery, using a Centrix C-R® Snap-Fit Composite Placement Syringe, into the preparation. RapidCore™ MiniMix™ is advertised to be a radiopaque, self-cure composite core paste that is touted to have cure initiation at the tooth interface to control shrinkage and reduce internal polymerization stresses. This resin composite core material is described to possess a thixotropic viscosity that allows direct placement within preparation features while reducing the need for matrix bands. RapidCore™ MiniMix™ is said to allow preparation in two minutes, provide the same resistance to cutting as dentin, and is available in three shades.



Manufacturer:

Centrix Dental
770 River Road
Shelton, CT 06484
(800) 235-5862
(203) 929-5582
(203) 929-6904 FAX
www.centrixdental.com

Suggested Retail Price:

- \$93.95 RapidCore™ MiniMix™ Kit (12); (Natural Shade: #310126; White Shade: #310127; Contrast Shade: #310128) contains:
- 12 – 0.50g cartridges RapidCore™ MiniMix™
 - 12 – Mixing nozzles
 - Instructions
- \$230.95 RapidCore MiniMix Kit (36); (Natural Shade: #310256; White Shade: #310257; Contrast Shade: #310258) contains:
- 36 – 0.5g cartridges RapidCore™ MiniMix™
 - 36 – Mixing nozzles
 - Instructions

Government Price:

- \$53.97 RapidCore™ MiniMix™ Kit (12) (item number and contents as listed above)
\$167.40 RapidCore™ MiniMix™ Kit (36) (item number and contents as listed above)

ADVANTAGES:

- + Unit-dose delivery system
- + Automix syringe system allows direct delivery of material into preparation
- + Available in three shades (White, Natural, Contrast)
- + Material can be placed in bulk
- + Diametral tensile strength comparable to other resin core materials evaluated by DECS and compares favorably with reports in scientific literature
- + Acceptable flexural strength
- + May be prepared immediately after curing
- + Adequate working and setting time

DISADVANTAGES:

- Flexural modulus less than other resin core materials tested
- Radiopacity between that of enamel and dentin
- Flexural strength and modulus are negatively affected by simulated environmental storage conditions
- More expensive than other resin core materials

SUMMARY AND CONCLUSIONS:

RapidCore™ MiniMix™ is a self-curing, unit-dose delivery system version of Centrix Dental's RapidCore® resin composite core material product. Acceptable diametral tensile and flexure strengths were found during laboratory testing and the material displayed a radiopacity between that of enamel and dentin. Clinical evaluators appreciated the ease and convenience of the unit-dose delivery system and overall thought well of the clinical handling characteristics. Clinical users expressed a desire for a thicker viscosity for some clinical situations. It should be noted that the manufacturer has introduced a dual-cure version of RapidCore™ MiniMix™ since the start of this evaluation. Although the unit-dose delivery system would favor this material's use in an expeditionary capability, RapidCore™ MiniMix's flexural strength and modulus was negatively affected by simulated environmental storage conditions and would require it to be hand carried into theatre by expeditionary personnel and not placed in prepositioned storage. Although RapidCore™ MiniMix™ is more expensive per gram than most resin core materials, the extra expense may be worthwhile because of its unit-dose convenience. Although its performance under simulated environmental storage conditions renders it **Marginal** for expeditionary consideration, **RapidCore™ MiniMix™** is rated **Acceptable** for use in US Air Force dental facilities.