

Radica® Provisional & Diagnostic Resin (Project #07-020) (8/11)



Radica is a new system for provisional and diagnostic restorations from DENTSPLY Ceramco. Based on a visible light curing (VLC) composite platform, Radica has been developed to exceed the performance criteria of currently available provisional restorations. Based on the Enterra visible light curing system, Radica involves laboratory procedures to fabricate a provisional restoration “shell” which is relined at chairside. Radica is advertised to represent a dynamic method in which long-term provisional restorations are fabricated. The touted increased physical properties, compared to usual provisional methods, are said to be an improved method to deliver long-term and diagnostic provisional restorations.

Manufacturer:
 DENTSPLY Caulk
 38 West Clarke Avenue
 P.O. Box 359
 Milford, DE 19963-0359
 (800) 532-2855
 (302) 422-4511
 (800) 788-4110 FAX
www.caulk.com
www.dentsply.com



Suggested Retail/Government Pricing*:

Price*	Product	Item Number
\$1,628.23	Radica Deluxe Kit	908200
\$297.89	Radica Material Assortment Kit	908360
\$239.50	Radica Dentin & Enamel Assortment, 12 Pack	908300
\$21.83 ea	Enamel (Individual Syringe), 5g	908100 (Light) 908101 (Medium) 908129 (Translucent)
\$21.83 ea	Dentin (Individual Syringe), 5g	18 Available shades
\$239.50 ea	Radica Enamel Syringe Kit, 12 Pack	908305 908310
\$239.50 ea	Radica Dentin Syringe Kit, 12 Pack	9 Available shade kits
\$20.18 ea	Stains, 2g	908111 (Brown) 908112 (Blue) 908113 (Orange) 908114 (White) 908115 (Olive)
\$33.57 ea	Effect Dentin, 20g	908116 (Red-Orange) 908117 (Yellow-Orange) 908119 (Tissue Tint) 908130 (Deep-Red Tissue Tint)
\$47.05	Matrix Putty Kit, Small 17.6 fluid oz (520 mL)	908028
\$210.04	Matrix Putty Kit, Large 72.6 fluid oz (2,150 mL)	908033
\$13.03	Sealer, 0.5 fluid oz (15 mL)	908110
\$16.75	Model Separator, 0.35 oz (10g)	908029
\$5.13	Stain Mixing Pad	908036
\$37.82	Syringe Warmer Sleeve Replacement (8 pack)	949153
\$8.66	Stain Brush	9482606
\$10.54	Sealer Brush	908030
\$10.74	Model Separator Brush	9482666
\$456.55	Radica Syringe Warmer, 120V	908041
\$353.71	Dentsply Wax Pencil Pro, 120V	9995337
\$2,077.57	Enterra Curing Unit, 120V	9495100

ADVANTAGES:

- + Provides durable, esthetic, and strong long term provisional restorations
- + Reported to provide overall good esthetics compared to conventional provisional materials
- + Excellent diametral tensile strength values
- + Flexure strength similar to resin composites that are marketed for definitive restorations
- + Flexural modulus comparable to other commercially-available products
- + Kit is well organized and offers clinicians a wide range of clinical options
- + Expiration dates printed on individual unit doses and syringes

DISADVANTAGES:

- More expensive than traditional materials used for provisional restorations
- Requires the Enterra or Eclipse curing ovens
- Learning curve required

SUMMARY AND CONCLUSIONS:

Radica is a thermoplastic, composite-based resin material that allows the clinician to indirectly fabricate provisional restorations. The system is not intended for direct intraoral use due to high temperatures used in manipulating the materials. The Radica system consists of a Heating Unit, a Ney Wax Pencil Pro unit, a 12-Pack Dentin & Enamel Assortment Kit and a Material Assortment Kit. The system offers dentin shades matched to the Vita Classical shade guide (A1, A2, A3, A3.5, B1, B2, B3, C2, C4 and D2 shades). There is an i2 dentin shade included which allows for matching the whiter appearance of bleached dentin. Enamel shades come in Transparent, Light and Medium. Yellow-orange, red-orange and tissue (pink) Effect Dentin shades are contained within the Material Assortment Kit. Stains for surface characterization are available in white, blue, brown, olive and orange shades. Radica is compatible with Dentsply's Eclipse System which offers gingival shades matched to the Lucitone 199 denture base acrylic resin line as well as a clear, colorless material that is primarily intended for use in making occlusal splints and nightguards. This compatibility was found to be a useful feature when fabricating provisional restorations that required gingival extensions, such as implant supported restorations. Radica demonstrated hardness, flexure strength, flexure modulus, and fracture toughness laboratory values that were similar to resin composites marketed for definitive restoration purposes. During this evaluation, Radica was used primarily by a senior prosthodontist associated with a graduate prosthodontic residency program who was very impressed with the strength, durability, esthetics, and adaptability of the material. In fact, Radica was reported to provide superb performance in demanding complex clinical situations without signs of deterioration or wear—and quickly became the provisional material of choice for implant provisional restorations and excessive wear cases. Although the initial start-up costs are more expensive than traditional provisional restorations, the Radica system can be a worthwhile investment in the busy prosthodontic practice where clinical needs dictate a durable, long-term provisional material that also provides a wide range of esthetic options. **Radica** is rated **Outstanding** for use in US Air Force dental facilities.