

Palfique Estelite Resin Composite (Project 01-20) (09/01)

According to its manufacturer, Palfique Estelite is an esthetic, radiopaque, light-cured resin restorative designed for use in direct anterior and selected posterior restorations where esthetics is of primary concern. J. Morita specifically recommends it for Class I, V, and small Class II restorations in the posterior dentition as well as restorations of all surfaces in the anterior dentition. The company further claims that it is the world's first resin composite filled with spherically-shaped particles. This is purported to result in greater polishability in less time. Also claimed as advantages are minimal color change during polymerization, chameleon-like shade matching, and a high level of radiopacity.



Information from J. Morita notes that Estelite is a filled 71% by volume (82% by weight) with patented submicron (0.2-micron) silica-zirconia spherical particles. Based on percentage filler loading and average filler particle size, Estelite is best classified as a microhybrid. It is available in a total of 14 shades (which includes incisal, cervical, and two opaque shades), although only four (A1, A2, A3, A3.5) are included in the syringe kit version evaluated by DIS. In addition to the syringe package version, Estelite is available in pre-loaded tips (i.e., single-use capsules).

Manufacturer/Distributor:

Tokuyama Corp./J. Morita USA, Inc.
9 Mason
Irvine, CA 92618
(888) 566-7482
(949) 581-9600
(949) 465-1095 FAX
www.jmoritausa.com

Suggested Retail Price:

\$162.00 Palfique Estelite Paste Syringe Set (item no. 22-14400) contains:
-four 3-g syringes, 1 each of shades A1, A2, A3, and A3.5

Government Price:

\$105.30 Palfique Estelite Paste Syringe Set (contents and item number as listed above)

ADVANTAGES:

- + Exhibits a pronounced chameleon-like effect that facilitates shade matching.
- + Evaluators were highly impressed by its fine polishability and excellent overall esthetics.
- + DIS laboratory testing confirmed that the product is as highly polishable as microfills.
- + Good diametral tensile strength; comparable to that of other hybrids tested and stronger than microfills.
- + Available in a broad range of shades.
- + Syringes are clearly labeled with shade, lot number, and expiration date.
- + Recommended storage conditions are listed on box.
- + Material Safety Data Sheet (MSDS) is provided in kit.

DISADVANTAGES:

- Not adequately radiopaque for radiographic detection.
- Most evaluators found it somewhat sticky and difficult to sculpt.
- Syringe kit contains only four shades of resin; no bonding agent or shade guide is included.
- Not as hard as some hybrid composites tested by DIS.
- Instructions do not specify the maximum recommended thickness that can be placed prior to light activation.

SUMMARY AND CONCLUSIONS:

Palfique Estelite's handling characteristics were rated as comparable, overall, to those of other hybrid resin composites evaluated by DIS. The syringe version of the product is spartan: no dentin bonding agent or shade guide is provided and only four shades of the product are supplied. Users should be aware that Estelite is not adequately radiopaque as defined by published scientific literature or by the pertinent international standard. It should, therefore, be used with caution in the posterior dentition where adequate radiopacity is especially important for differentiating between tooth structure and the restorative material. The written instructions are deficient in not listing the maximum thickness of Estelite that can be placed prior to light activation. This is the first time DIS has encountered this deficiency in evaluating a resin composite. Estelite is mid-range in its cost, compared to many currently-available resin composites. Even with these shortcomings, this product clearly distinguishes itself by having a marked chameleon-like shade matching ability and high polishability that render it extremely esthetic. In short, Estelite is an excellent choice for cases such as large diastema closures and Class IVs where strong, fracture-resistant, esthetic restorations are necessary. **Palfique Estelite** is rated **Acceptable** for use by the federal dental services.