

## Heliomolar HB Resin Composite (Project 01-35) (01/02)

Heliomolar HB Resin Composite is an esthetic, high-viscosity, packable, light-cured restorative material designed for use in posterior teeth (Classes I and II). The product joins Micronew (Bisco) as one of the few "reinforced" microfills that have a higher viscosity than traditional microfills. According to the manufacturer, this is accomplished by using a special rheologic modifier. One important claim made for Heliomolar HB is that its thicker consistency makes it easier for clinicians to establish proper interproximal contacts. Among the other advantages claimed by Ivoclar Vivadent are excellent polishability and shade matching, adequate radiopacity, and high strength.



Heliomolar HB is filled 66.7% by weight (46% by volume) with silicon dioxide and ytterbium trifluoride particles. It is available in a total of 9 shades (7 of which are keyed to the Vita shade guide and two enamel shades). Beginning 1 April 2002, clinicians will be able to purchase two new Heliomolar HB shades: TG is a translucent gray and TW is a translucent white. The product is available in syringes and in wide-mouth capsules (Cavifils). Instructions call for placing the material in 1- to 2-mm increments and using a 20-second light curing time. Among other items, the kit includes a dispenser gun, Ivoclar Vivadent's unit-dose bonding agent (Excite), and a graphics-containing summary instruction card.

### Manufacturer:

Ivoclar Vivadent, Inc.  
175 Pineview Drive  
Amherst, NY 14228  
(800) 533-6825  
(716) 691-0010  
(716) 691-2285 FAX  
[www.ivoclarvivadent.us.com](http://www.ivoclarvivadent.us.com)

### Suggested Retail Price:

\$265.00 Heliomolar HB Cavifil Intro Pack (item no. 560193AN), contains:  
-sixty 0.25-g Cavifils, 10 each of shades A1, A2, A3, 5 each of shades B1, B2, C2, D2, WE, GE  
-two 1.6-g syringes of Heliomolar Flow, shade A3  
-10 Excite Soft Touch Unit Dose Vessels  
-one 2-g syringe of Total Etch  
-9 Astropol Finishers and Polishers  
-1 P-1 metal placement/contouring instrument  
--accessories

### Government Price:

\$116.77 Heliomolar HB Cavifil Intro Pack (item number and contents as listed above)

### ADVANTAGES:

- + Is the least expensive resin composite yet evaluated by DIS.
- + Users rated the product highly for polishability and overall esthetics.
- + The nine available shades were judged as adequate by the evaluators.
- + Resin's thicker consistency helps the user place restorations with good (i.e., tight) proximal contacts.
- + Does not slump after placement.
- + Is adequately radiopaque for easy radiographic detection.
- + Is packaged with Excite bonding agent, rated "Recommended" by DIS.
- + Syringes of Heliomolar flowable composite are included in kit.
- + Provided with user-friendly graphics instruction card illustrating use of all components.
- + Material Safety Data Sheet (MSDS) is provided with the product.

**DISADVANTAGES:**

- Instructions call for a 20-second light exposure, which is inadequate for proper polymerization.
- Clinical evaluators found the composite difficult to manipulate after placement.
- Not as hard as Micronew (another "reinforced" microfill).
- Diametral tensile strength was no greater than that measured for three other microfills.
- Kit comes with scant supply of dentin bonding agent.
- Expiration date is not printed on individual Cavifils.

**SUMMARY AND CONCLUSIONS:**

Overall, Heliomolar did well in clinical-user testing. Its polishability, esthetics, and shade matching were rated highly by users. Its thicker consistency made it a good choice for restorations where establishing adequate proximal contacts is important. A few evaluators felt it was hard to sculpt after placement, presumably because its greater thickness made it difficult to draw the resin in thin layers into certain areas of the preparation. In general, even though it is labeled a "reinforced" microfill, its physical properties were comparable, but no better than those of traditional microfill resin composites. Unlike nearly all other microfill resin composites currently on the market, Heliomolar HB has an excellent degree of radiopacity which makes it easy to detect radiographically. It is important that clinicians know that Heliomolar HB's recommended light-exposure time (20 seconds) is inadequate. To be safe, users should place it in layers no thicker than 2 mm and use a 40-second exposure time. Assuming clinicians use a minimum of 40 seconds for light activation, **Heliomolar HB Resin Composite** is rated **Acceptable** for use by the federal dental services.