

TPH³ Micro Matrix Restorative (Dentsply - Caulk) (Project 07-20) (11/08)

TPH³ is a resin composite restorative material advertised as being formed from Dentsply Caulk's Micro Matrix Technology, which purportedly blends nanofilling technology with proprietary fillers forming a restorative material said to provide both excellent esthetics and durability. TPH³ is said to possess excellent surface luster, creamy and non-sticky clinical handling behavior, as well as strong and balanced physical properties. The resin matrix of TPH³ is described as providing very efficient cross-linking during polymerization that demonstrates balanced light-refractive properties to provide lifelike esthetics and color absorption. Shade selection is via a Vita-based guide that is made from actual TPH³ material. TPH³ is available in both CompuLe and Easy*Twist Syringe delivery methods.



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
caulkinfo@dentsply.com
www.caulk.com
www.dentsply.com

Suggested Retail Price:

- \$486.50 CompuLe Tips Complete Organizer System (#642700)
Contains: 96 TPH³ CompuLe Tips (0.25 g each)
6 – (each shade) A1, A2, A3, A3.5, LYG
4 – (each shade) B1, B2, C2, C3, LB, DB, L, LG
3 – (each shade) A4, B3, C1, C4, D3, XL, CE, YE
2 – (each shade) BW, DY, XGB, B1-I, C2-O
TPH³ Shade Guide
1 – 3mL syringe Caulk 34% Tooth Conditioner Gel
10 – Prime & Bond NT Unit Doses
1 – CompuLe Tips Gun
1 – 1.3 g syringe Esthet*X Flow
10 – Enhance Discs
5 – Enhance Cups
5 – Enhance Points
1 – 4 g syringe Prisma Gloss
1 – 4 g syringe Prisma Gloss Extrafine
- \$273.60 CompuLe Tips Intro System (#642701)
Contains: 36 TPH³ CompuLe Tips (0.25 g each)
6 – (each shade) A1, A2, A3, A3.5
4 – (each shade) B1, B2, C2
2 – shade CE
TPH³ Shade Guide
1 – 3mL syringe Caulk 34% Tooth Conditioner Gel
5 – Prime & Bond NT Unit Doses
1 – CompuLe Tips Gun

- 5 – Enhance Discs
- 3 – Enhance Cups
- 2 – Enhance Points
- 1 – 4 g syringe Prisma Gloss
- 1 – 4 g syringe Prisma Gloss Extrafine

\$405.50 Easy*Twist Syringe Introductory Kit (#642706)
Contains: 8 TPH³ Syringes Assorted (3 g each)
1 – (each shade) A1, A2, A3, A3.5, B1, B2, C2, CE
TPH³ Shade Guide
1 – 3mL syringe Caulk 34% Tooth Conditioner Gel
5 – Prime & Bond NT Unit Doses
1 – Compules Tips Gun
5 – Enhance Discs
3 – Enhance Cups
2 – Enhance Points
1 – 4 g syringe Prisma Gloss
1 – 4 g syringe Prisma Gloss Extrafine

Government Price:

(item number and contents as listed above)

\$265.41 Compules Tips Complete Organizer System
\$149.27 Compules Tips Intro System
\$221.20 Easy*Twist Syringe Introductory Kit

ADVANTAGES:

- + Reported to possess excellent clinical handling characteristics
- + Reported to provide overall good esthetics
- + Twenty second visible light polymerization provides adequate 2 mm depth of cure
- + Compatible with LED curing lights
- + Flexure strength comparable to other commercially-available products
- + Flexural modulus comparable to other commercially-available products
- + Simulated environmental storage conditions do not impair physical properties
- + Demonstrates polymerization shrinkage in the range of other commercially-available resin composites tested by DECS
- + Excellent radiopacity
- + Expiration dates printed on individual unit doses and syringes

DISADVANTAGES:

- One of the more expensive resin composites evaluated by DECS
- No long term clinical data with nano filled resin composite restorations

SUMMARY AND CONCLUSIONS:

TPH³ exhibited similar physical properties (flexural strength, modulus, diametral tensile strength, and shrinkage) compared to other resin composites evaluated by DECS. Clinical users overall appreciated the TPH³ packaging configuration and thought the technique information was adequate. The evaluators also appreciated the clinical handling characteristics displayed by the material, with all evaluators reporting that TPH³ resisted slumping, was easily sculpted, and maintained the desired configuration before light curing. TPH³ was found to possess more than adequate radiopacity, and simulated expeditionary environmental storage conditions did not significantly affect TPH³'s flexural strength or modulus. TPH³ is the second most expensive resin composite restorative material that has been evaluated by DECS up to this date. TPH³ is rated **Acceptable** for use in US Air Force dental facilities.