

REALITY ONLINE

THE INFORMATION SOURCE FOR ESTHETIC DENTISTRY

SEPTEMBER 2011

25th Anniversary

The Ratings | CORE MATERIALS – DUAL-CURED

3



(4.2)



RAVES & RANTS

- + A3 has outstanding depth of cure
- + Adapts very well to preps and posts
- Hardness does not quite match dentin
- Somewhat runny

MANUFACTURER

Premier
www.premusa.com

PRICES

INTRO KIT
\$276.70/50g (\$5.53/g)

REFILLS

\$168.35/50g (\$3.37/g)

SHELF LIFE

2 years

CompCore AF Stack

INTRODUCTION/MANUFACTURER'S CLAIMS

Dual-cured, auto-mix core material with "hyperbranched" technology, in which the resin matrix uses very large molecules with many branches to improve mechanical properties. It is also stated to have exceptional radiopacity "allowing easy differentiation between the restorative material and tooth structure". Furthermore, due to the "revolutionary transparent glass" filler, it is stated to cure to a depth of 8.0mm after 30 seconds of light curing. It is also stated to be fluoride-releasing.

DISPENSING

Automix syringes with two types of intraoral tips, a larger one for core buildups and a longer, fine tip usually included for injecting it into postholes, although that use is not listed as one of its indications.

FILLER CONTENT (%)

WEIGHT	60
VOLUME	33

CONSISTENCY AND HANDLING

Most evaluators (78%) liked the way it handled, while 22% thought it was too sticky.

FLOW

SHADE	FLOW (0-5)
A3	5.0
White	5.0

Slightly more than half (56%) of the evaluators considered it to be just right, while the remaining 44% thought it was too runny. One evaluator commented that the flow was good, but it really slumped to the distal on a mandibular first molar build-up. However, another evaluator stated that it was runny enough to assure coverage of tooth structure and around post but stiff enough to allow buildup and another generally used a copper band matrix, and material flowed nicely without leaving voids.

WORKING TIME

Most (89%) evaluators thought the working time was acceptable, while 11% needed more time.

SET TIME (SELF-CURED MODE)

All evaluators thought the set time was acceptable.

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EXOTHERM (°C)

SHADE	°C CHANGE
A3	3
White	3

SCRAPE TEST (MM)

SHADE	mm
A3	8.1
White	6.5

HARDNESS (KNOOP)

41.9 Slightly more than half (56%) of the evaluators considered it to cut like dentin, while 11% thought it was harder than dentin and the remaining 33% thought it was softer.

SHADES

2

SHADE	DESCRIPTION
A3	darker than A4
White	off-white

Most evaluators (78%) thought the two shades were acceptable, while the other 22% wanted more choices, such as a lighter (A2) one. One evaluator thought A3 matched dentin closely.

TRANSLUCENCY/OPACITY (T/O%)

SHADE	T/O RATING (%)
A3	44
White	77

PACKAGING

Conventional cardboard box with flip-open top (that would not stay closed for one evaluator) that includes the directions in a slot on the underside. Easy to stack, with product identification on two sides and top. Manufacturing and expiration date is on the back. Sealed with shrink-wrap for security. Contents are secured in a removable plastic tray. The push-type, dual-barrel syringes have the shade and expiration date on the well attached labels, but disinfection tends to remove the expiration date.

DIRECTIONS

Single, plain paper sheet in English, although international evaluators received multi-language versions. Instructions wisely advise you to use a dual-cured bonding agent. However, then the steps get a little strange for applying the bonding agent such as etching the "entire cavo surface for 10 to 15 seconds". As one evaluator stated: the manufacturer has missed the point with cores, which typically do not have a "cavo surface".

REALITY

COMPCORE AF STACK

Strengths Nice flowable consistency that adapts well to tooth structure and posts. Easy to dispense with both types of intraoral tips. Most evaluators liked the handling. Its scrape test results for A3 were excellent and confirmed manufacturer's claims. Adequate working time. Very good radiopacity. Low exotherm.

Weaknesses Hardness is slightly lower than dentin, even when light cured for 40 seconds. Although flow tested at 5.0, 44% of evaluators considered it to be somewhat runny and not as stackable as they would like. White doesn't cure as deeply as A3.

BOTTOM LINE Outstanding light curing property (A3), easy to dispense and adapt to preps and posts, and exceptional radiopacity, but it's slightly runny and not quite as hard as dentin.

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