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Integrity Temporary Crown and Bridge Material (Project 95-38) (05/96)

Integrity is a chemically-polymerized composite resin used to fabricate provisional (temporary) crowns and bridges. The product is supplied in automix cartridges and is available in three shades keyed to the Vita shade guide (A1, A2, A3.5). Two sizes of mixing tips are available: a small size for dispensing Integrity when making a single-unit temporary and a larger tip when dispensing material for multiple temporaries or a fixed partial denture.

To use Integrity, a shade is selected and the appropriate cartridge is inserted into the dispenser gun. A small amount of the material is dispensed to "bleed" the cartridge as a means of ensuring that the ends of the cartridge are not blocked. A mixing tip is then attached and Integrity is expressed into a vacuum-formed plastic stent, alginate impression, or silicone impression. Caulk recommends inserting the stent and mixed Integrity into the mouth within 45 seconds after mixing. The stent can be removed 60 seconds after seating. The provisional restoration should then be allowed to continue polymerizing for 5 minutes before being finished and polished.

Manufacturer:

L.D. Caulk
L.D. Caulk Division
Dentsply International, Inc.
P.O. Box 359
Milford, DE 19963-0359
(800) 532-2855
(302) 422-4511
(800) 788-4110 FAX

Suggested Retail Price:

\$180.00 Integrity Complete Package (item numbers vary according to shade ordered: 666101 for A1, 666102 for A2, 666103 for A3.5). Contents:

one 55-g cartridge of material
five large mixing tips
five small mixing tips
one Dispenser

\$115.00 Refill Package (item numbers vary according to shade ordered: 666111 for A1, 666112 for A2, 666113 for A3.5). Contents:

one 55-g cartridge of material
five large mixing tips
five small mixing tips

Government Price:

\$117.00 Integrity Complete Package (item numbers and contents as listed above)

\$74.75 Refill Package (item numbers and contents as listed above)

ADVANTAGES:

- +Produces accurately-fitting, esthetic provisional restorations.
- +Easy to trim and polish.
- +Exhibits little, if any odor.
- +Setting time is very appropriate; clinicians can remove stent approximately one minute after placement.
- +Product is supplied in cartridges used in automix gun system; this makes mixing quick and easy and ensures that a consistent mixing ratio is used.
- +Two sizes of mixing tips are available which minimizes waste and facilitates product placement.
- +A plastic device is provided to remove mixing tips from cartridge.
- +Shades are keyed to the Vita shade guide.
- +Shades are clearly listed on the side of the cartridges.

- +Sufficient number of shades for most clinical cases.
- +Provided with concise, user-friendly, illustrated instruction sheet.

DISADVANTAGES:

- Some clinicians may find that the product's working time is short and that they have to work expeditiously to seat the stent before the material begins to set.
- Material undergoes a "snap-set"; if using a direct technique, clinicians must pay close attention to the clock during polymerization to keep it from locking into undercuts or fracturing during removal.
- Mixed material is relatively thin; some users may find it difficult to work with because of the low viscosity.
- Is difficult to repair using a new mix of Integrity.
- Product is more brittle than standard acrylic provisional materials which may lead to a greater number of fractured provisional restorations.
- Has a noticeable air-inhibited layer that makes handling the provisional difficult until the layer is removed.
- Product is only minimally radiopaque; detection on radiograph is difficult.
- Cartridges require a special dispenser gun.

SUMMARY AND CONCLUSIONS:

Integrity was well accepted by the clinical evaluators who found that it produced esthetic, easily polished, extremely well-fitting provisional restorations. Although only three shades are available, they were sufficient for a majority of the evaluators. The automix dispenser system made it easy to mix the product and produced homogeneous mixes. Users found the mixing system efficient and helpful. Some problems were noted by the users, but most learned to alter their technique to compensate for them. Chief among the shortcomings were a relatively short working time and a tendency for the material to abruptly convert from a liquid to solid (or semi-solid). This "snap set" forced clinicians to carefully watch the amount of time the material had been in the mouth. If they didn't, the restoration often locked into an undercut or fractured during removal. Integrity also is only minimally radiopaque, has a thin viscosity, and has a noticeable air-inhibited layer that must be removed with alcohol or with a finishing disk or bur. The product is not easily repaired with a new mix of Integrity but can be repaired using other composite resins. Despite these characteristics, clinical evaluators rated the product highly and were impressed with its overall performance. **Integrity Temporary Crown and Bridge Material** is rated **Acceptable** for use by the federal dental services.