

Made in USA

Instructions

ACORN NANO-MICRO HYBRID VISIBLE LIGHT-CURED COMPOSITE RESTORATIVE AND DENTIN/ENAMEL ONE STEP LIGHT-CURED BONDING AGENT

SUITABLE FOR

Class I, II, III, IV and V restorations. Fabrication of extraoral tempered inlays and onlays by direct or indirect method. Fabrication of extraoral tempered custom made veneers

CONTAINS

Syringe Operatory Kit

Shade A-1	4.5 g
Shade B-2	4.5 g
Shade A-2	4.5 g
Shade A-3	4.5 g
Shade A-4	4.5 g
Shade B-3	4.5 g
Shade C-2	4.5 g
Shade D-3	4.5 g
Z-Bond Bonding Agent	7 cc
Enamel Conditioner	12 g
Accessories and Instructions	



Single Dose Capsules Kit

Shade A-1	10x.25 g
Shade B-2	10x.25 g
Shade A-2	10x.25 g
Shade A-3	10x.25 g
Shade A-4	10x.25 g
Shade B-3	10x.25 g
Shade C-2	10x.25 g
Shade D-3	10x.25 g
Z-Bond Bonding Agent	7 cc
Enamel Conditioner	12 g
Accessories and Instructions	

THE FOLLOWING ACORN SHADES AVAILABLE SEPARATELY

- Acorn Shade B-1
- Acorn Shade A-3.5
- Acorn Shade C-3
- Acorn Incisal

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OUTSTANDING FEATURES OF THE MATERIAL

- ✚ A highly polishable, photocuring, nano-micro hybrid composite for anterior and posterior restorations.
- ✚ Meets the requirements of: DIN 13922 and ISO 4049
- ✚ High nano-micro hybrid filler content contributes to low shrinkage, low water sorption, low coefficient of thermal expansion and good wear and scratch resistance.
- ✚ The total filler load is 71%. The total filler volume is 56.51%.
- ✚ Excellent x-ray opacity for future diagnosis
- ✚ Superior esthetics due to a well-balanced opacity, and availability of multiple shades.
- ✚ Outstanding color stability.
- ✚ Excellent marginal integrity.
- ✚ The shelf life is 3 years when stored at 23°C (74° F). Cool storage prolongs shelf life.
- ✚ Does not stick to the end of the insertion instrument.
- ✚ Light-cure hydrophilic, one step, Dentin/Enamel bonding agent is supplied in the kit in order to provide optimal marginal seal.

PROPERTIES OF THE MATERIAL

Acorn is a light-cure, nano-micro hybrid which is based on BIS-GMA resin and inorganic filler particles of 0.007-0.70 microns.

The total filler load is 71%. The total filler volume is 56.51%

COMPOSITION %

Resin based on BIS-GMA	19
Prepolymerized resin, silica	26
Bariumglas 1 micron	54
Catalyst, Stabilizer, Pigments etc.	1

PHYSICAL DATA

Depth of cure 40 sec	2.90 MM
Flexural strength	154 MPa
Diametral tensile strength	62 MPa
Compressive strength	432 MPa
Polymerization shrinkage linear	0,2 %
Barcol hardness	68
Coefficient of thermal expansion	32
Visual opacity	45 %
Water sorption	12 µg/g
Water solubility	1 µg/g
Radiopacity	strong
Polishability	high gloss

CURING OF ACORN COMPOSITE

Acorn cures to the depth of 2.90 mm. To minimize the effects of polymerization shrinkage, curing in layers is recommended especially, if the restoration is more than 2.5 mm deep.

ADDITIONAL NOTES

- ✚ Do not use any resin to adjust viscosity of composite restorative material.
- ✚ Do not store the composite material in proximity to eugenol containing products, nor let the composite come into contact with materials containing eugenol. Eugenol can impair the hardening of the composite and cause discoloration.
- ✚ Contact of resin pastes with skin should be avoided, especially by anyone known to have resin allergies.

CLINICAL PROCEDURES

CAVITY PREPARATION

- + Tooth should be cleaned with non-fluoridated prophylaxis-paste.
- + Shade selection should take place when teeth are still wet, thus having their natural appearance.

Anterior

Class III, IV and V adhesive should be done with enamel margin beveling.

Posterior

- + Protect adjacent teeth by wedging with wooden wedges for initial treatment.
Use a tooth conserving preparation. For a secondary treatment remove all old restorations completely.
- + Isolation
Rubber dam is recommended.
- + Base lining
Only with deep preparations adjacent to the pulp, a thin layer of Calcium Hydroxide should be placed.
With very deep and extended cavities a build-up of a base lining with glass-ionomer cement is recommended.
- + Matrix, wedges
Remove wooden wedges and protect adjacent teeth with a matrix band. In distal, place a translucent matrix band and wedge with wooden or light-reflecting wedges.

ACID ETCHING

Enamel

Etch the enamel surrounding the cavity with etchant. Rinse and dry. Or, skip etching and use Dent Zar's **Z-Bond-one step light cure self-etching dentin/enamel bonding agent**. *Etching is necessary on uncut enamel.* (See Z-Bond-one step light-cure self-etching dentin/enamel bonding agent instructions.)

Wash and dry. Place restorative material with a tapping movement and cure.

Dentin

No treatment is needed if using Dent Zar's Z-Bond-one step light-cure self-etching dentin/enamel bonding agent.

APPLICATION OF THE Z-BOND BONDING AGENT

Please see Z-Bond instructions.

BUILD-UP OF THE RESTORATION WITH ACORN

Due to polymerization shrinkage of composites, all composite restorations must be built up in the layering technique. Due to oxygen inhibition a thin, unpolymerized layer remains on the surface, which is called the dispersion layer. This layer is mandatory for the bond of individual layers and may not be destroyed by touching or influence of moisture.

Anterior

Place Acorn into the cavity and adapt to the cavity walls.

For the convenience of handling, the use of the teflon instruments for placing the restorative into the cavity is recommended. Place the restorative using short tapping strokes. Avoid spatulating.

Posterior

Initially place the gingiva proximal restoration parts in layers (max 2.5 mm).

Thereafter, complete the occlusal aspects. Again polymerize each layer separately. When lumen wedges are used, irradiation takes place initially from the side through the lumen wedges after the interproximal step is adapted.

HELPFUL HINTS

TRIMMING, FINISHING AND POLISHING

For trimming remove matrix band and wedges. Contour of the restoration and the removal of excessive material is done with fine and superfine diamond burs. Flexible discs, polishing strips or silicone polishers together with composite polishing pastes are used for polishing. High gloss surfaces comparable to microfill composites are attainable with Acorn.

FLUORIDATION

It is recommended to complete a restorative measure with fluoridation of the treated area.

INLAY/ONLAY TECHNIQUE

It is mandatory to read the comprehensive instructions on the inlay technique prior to beginning. The build-up of an inlay restoration with the direct method starts after the isolation of the cavity; with the indirect method, after the isolation of the plaster model with Insulating-Gel; the above-mentioned layering technique must be followed in both cases. The in-mouth pre-cured inlay restoration is removed from the cavity with an Inlay pin and tempered in a Translux Lightbox, a Dentacolor XS or a Unilux AC unit.

Inlays are luted with adhesive cement.

STORAGE

The shelf life is 3 years when stored at 23°C (74°F). Cool storage prolongs shelf life. Keep syringes tightly capped between uses.

All kit components, accessories and auxiliaries are available separately.