

## UNIREST

### universal hybrid composite restorative light-cure material

#### COMPOSITION

Urethane-methacrylate, Bisphenol A-glycidyl methacrylate (Bis-GMA), Triethylene glycol dimethacrylate (TGM), Butylated hydroxytoluene, Camphorquinone, Trimethacrylate triethanolamine (TMATEA), Fluorescent pigment, Barium aluminoborosilicate glass PM-3, Glass filler GM 32087, Acetic acid, Aluminum oxide, Silane A-174, Iron oxide pigments: red 7067, yellow 7055

#### PURPOSE

Light-cure composite restorative material "UNIREST" is designed to restore the cavities of teeth of I - VI classes for adults and children. It has the form of a paste which is cured by visible light wavelength of 450 - 500 nm and which is contained in light-proof syringes (containers)

#### PROPERTIES

"UNIREST" is hybrid composite material with the average dispersion of the filler particles 0.7 micron. The degree of inorganic filler contained in the material is  $79 \pm 1$  %. The material has transparency close to that of enamel, is radiopaque, fluorescent, color stable, can be easily polished.

It is available in the following colors according to Vita scale: A1, A2, A3, A3.5, B2, C2, C4, OA3.5, OB2, clear incisal edge, gingival shades: P, T (P – intermediate, T – dark).

The "UNIREST" set contains: the filling material, light-cure "Primer-Adhesive" for enamel and dentin, etching gel.

**Composite light-cure paste** is uniform paste without bubbles and dry elements, traces of pigment or impurities, having flexural strength not less than 50 MPa, water absorption not more than 50 mcg/mm<sup>3</sup>, polymerization depth for 10 seconds not less than 2 mm and diametric strength not less than 34 MPa.

**Light-cure primer-adhesive for enamel and dentin** represents transparent, slightly yellowish liquid with the odor of acetone, the time of gel-forming during cure by light of 450 - 500 nm is not more than 20 seconds.

**Etching gel** is uniform blue gel without impurities, containing  $34 \pm 1.5$ % phosphoric acid, consistency 25+5 mm and flowability allowing to hold form for at least 1 minute.

#### Clinical procedure

While working with UniRest it is recommended to use the traditional technique of working with composite materials: making micro-mechanical adhesion of the material to the tooth. Temporary and layer materials, if used, should not contain eugenol.

#### Shade determination

Shade determination is made after cleaning the teeth enamel by preventive paste or pumice. The teeth should be still moist for shade determination. The shade is determined under natural or artificial illumination.

#### Cavity preparation

Prepare the cavity according to the principles of the adhesive technique. Clean with a spray of water and dry with air. Prevent oral fluids, blood from contacting the conditioned cavity. Appropriate isolation with a rubber dam or a cotton roll may be used.

#### Etching of enamel and dentin

The technique of total etching is recommended: enamel is etched for not less than 15 seconds, dentin – for 5-15 seconds depending on indications. Then rinse the gel off with water, dry the tooth surface with air, avoiding overdrying dentin. The etched and dried surface must be safeguarded from oral fluids, blood, saliva. If the etched tooth surface is contaminated, repeat the procedure.

#### Application of the "Primer-Adhesive"

Apply Primer-Adhesive with a brush or microapplicator, spread it evenly thinly over the enamel and dentin surface, rub it for 15 seconds, blow with air until a still glistening film is formed on the surface; cure with light of 450-500 nm for 20 seconds.

To increase the adhesion it is recommended to place the second layer of Primer-Adhesive (in this case do not cure the first layer); then blow with air until a still glistening film is formed on the surface; cure for 20 seconds and immediately place the filling material.

#### Placing the filling material

Insert the material of the chosen shade into the prepared cavity by layers of 2 mm or less, then cure each layer with light for 20 seconds. The technique of placing the material in layers allows to minimize its shrinkage. Use matrix strips and matrix systems if necessary.

#### Curing

Every inserted layer should be light-cured for at least 20 seconds if halogen source of polymerization is used, and at least 10 seconds for light-emitting diode one.

In case of Class III and IV restoration the composite should be cured from both vestibular and oral surface.

If composites of A3, A3.5, C4, OA3.5, OA3, OB2 Vita shades are used, the time of curing should be increased by 5-10 seconds.

#### Finishing

Finishing may begin after curing the last layer. Use finishing diamond or carbide drills and water spray. For polishing the seal surface use silicon polishing heads of various forms, discs and strips.

#### CONTRAINDICATION

Unirest contains methacrylate components, if the paste or adhesive cause allergy of increased sensitivity, you must stop the use of material.

#### SIDE EFFECT

The composite material and Primer-Adhesive may cause allergic reaction. Etching gel cause irritation of oral mucosa and skin.

#### PRECAUTIONARY MEASURES

Etching gel contains orthophosphoric acid. Avoid contact with skin, oral mucosa, eyes and clothes. In case of contact with these, flush immediately with large amount of water.

#### TRANSPORTATION

Unirest may be transported by all types of covered transport vehicles in accordance with rules of transportation for each type of transport. It may be transported via post, by cars and in containers. Temperature during transportation should be within  $+(5+24)^{\circ}\text{C}$

#### STORAGE

Syringes with the filling material, the vial with Primer-Adhesive must be closed immediately after use. They should be kept in a place not exposed to direct sunlight at temperature not above + 24° C. If refrigerated during storage, the filling material and Primer-adhesive before use must be kept at room temperature for at least 1 hour.

**SHELF LIFE**

Shelf life of the material is 2 years. Do not use the material after expiration of shelf life

**PRODUCER GUARANTEE**

The producer guarantees correspondence of Unirest material to all technical requirements on condition of observing all rules of utilization, transportation and storage.

**PLACES OF USE**

For use in hospitals, dentistry clinics and mobile medical complexes.

**DISPOSAL**

Disposal of material with expired shelf life or which became unfit for other reasons, should be made through collection of material into container with subsequent removal by a specialized agent.

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