

FlowFix Duo

composite dual-cure material for constant fixation

COMPOSITION: Bis-GMA, TGM, Trimethylolpropane trimethacrylate (TMTM), Butylated hydroxytoluene, Benzoyl peroxide, Dihydroxyethyl para-toluidine, Barium aluminoborosilicate glass, Urethane dimethacrylate, Glass ceramic, Silane, Acetic acid, Sodium fluoride, Camphorquinone, Trimethacrylate triethanolamine, iron oxide pigments

PURPOSE

Dual-cure composite material "FlowFix DUO" is used for constant cementation of indirect restorations made of ceramics, composites, metal and for the fixation of pins made of various materials.

PROPERTIES.

"FlowFix DUO" consists of two low-viscosity pastes – universal and catalyst, which are mixed in 1:1 proportion and have dual mechanism of polymerization – self-cure and light-cure with the wavelength of 450 - 500 nm.

The material appearance is smooth uniform flowable paste without external additions, transparent, has consistency of 32-35 mm.

At the temperature of $(23\pm 1)^{\circ}\text{C}$:

- working time (without exposure to light) is not less than 60 seconds;
- self-cure time (without exposure to light) is not more than 10 min;
- flexural strength is not less than 50 MPa;
- water absorption: not more than 40 mkg./mm³
- water solubility: not more than 7,5 mkg./mm³

The material is radiopaque.

ADDITIONAL MATERIALS

Dual-cure adhesive for enamel and dentin is used for the creation of adhesion of the material to the teeth tissues. It consists of two liquids – main and catalyst, which are mixed in 1:1 proportion and have dual mechanism of polymerization – self-cure and light-cure with the wavelength of 450 - 500 nm.

Dual-cure adhesive is uniform liquid without external additions

At the temperature of $(23\pm 1)^{\circ}\text{C}$:

- working time (without exposure to light) is not less than 60 seconds;
- self-cure time (without exposure to light) is not more than 10 min

Ceramicgel (gel containing 9% of hydrofluoric acid stabilized by buffer) is used for the etching of ceramic prostheses before fixation. It is uniform gel of yellow colour without external additions.

Content of hydrofluoric acid – $9.2\pm 0,5\%$

Barrier gel is used for the neutralization of Ceramicgel

Appearance - uniform gel of green colour without external additions

Content of bicarbonate sodium – $5.3\pm 0,5\%$

Silane primer is used for improving adhesion of prostheses made of ceramics and metals at constant fixation by the material.

Appearance - uniform liquid without external additions

CLINICAL PROCEDURE

Remove temporary prostheses, carefully clean cavity or prepared tooth-core, with the use of a cleaning paste not containing oil or fluorides. Check dimensions and contact points of the prosthesis and make a fitting. After fitting clean the teeth and prosthesis of possible remains. Prepare prosthesis and dry thoroughly. Dry teeth surface with a weak air flow leaving dentin wet.

FIXATION OF PROSTHESES

Made of composite material

Provisional preparation of the surface:

- after preparation, the cavity or the tooth-core should be rinsed, dried and then etched with the etching gel for not more than 20 seconds. Then wash it for 20 seconds and dry;

- in a cuvette prepare the dual-cure adhesive: mix in 1:1 proportion main and catalytic liquids. Time of mixing: 10 seconds. Place the adhesive mixture into cavity, then rub during 10-15 seconds, dry with air till liquid stops moving and cure with light of 450 - 500 nm during 20 seconds. The treated surface should be shiny, if it is not - the procedure of adhesive treatment should be repeated;

- remove the cap from "FlowFix DUO" syringe and press it slightly to extract the first portion (there may be a slight difference in the level of filling of two syringe chambers with material); then place the mixing tip and the intraoral tip, accurately press the piston rod and place in an even layer of mixed material on the prepared contact surfaces of the prosthesis;

- fix prosthesis in the oral cavity. Cure material with light of 450 - 500 nm during 10 seconds and remove remains. Cure time till full polymerization: 20-30 seconds. After light-cure it is necessary to wait approximately 6-8 minutes from the time of mixing till full polymerization of the material.

Made of ceramics

Provisional preparation of the surface:

- put on the prepared ceramic surface a thin layer of Ceramicgel (gel containing 9% of hydrofluoric acid stabilized by buffer) .

Etching time is 60 seconds. For neutralization of gel containing hydrofluoric acid it is recommended to put on its surface a layer of Barrier gel and mix them accurately till reaction stops. Remove neutralized Ceramicgel, wash thoroughly with water during 1 minute and dry the etched area. The etched area should be matte in appearance.

- place Silane primer on the prepared surface with the use of a microbrush and leave for 60 seconds. Dry the surface with air.

- remove the cap from "FlowFix DUO" syringe and press it slightly to extract the first portion (there may be a slight difference in the level of filling of two syringe chambers with material); then place the mixing tip and the intraoral tip, accurately press the piston rod and place in an even layer the mixed material on the prepared contact surfaces of the prosthesis;

- fix prosthesis in the oral cavity. Cure material with light of 450 - 500 nm during 10 seconds and remove remains. Cure time till full polymerization: 20-30 seconds. After light-cure it is necessary to wait approximately 6-8 minutes from the time of mixing till full polymerization of the material.

- **Made of metal or having metal carcass**

Provisional preparation of the surface:

- make the sandblast treatment of the surface of prosthesis till it reaches a homogenous matte state;
- clean prosthesis in the ultrasonic bath for 1 minute, rinse with water and dry;
- place Silane primer in a thin layer, wait 60 seconds and dry with air;
- remove the cap from "FlowFix DUO" syringe and press it slightly to extract the first portion (there may be a slight difference in the level of filling of two syringe chambers with material); then place the mixing tip and the intraoral tip, accurately press the piston rod and place in an even layer the mixed material on the prepared contact surfaces of the prosthesis;
- fix prosthesis in the oral cavity. Cure material with light of 450 - 500 nm during 10 seconds and remove remains. The metal basis of prosthesis does not allow to fully light-cure the material, therefore it is necessary to wait approximately 8-10 minutes from the time of mixing till full polymerization of the material.

FIXATION OF PINS

After endodontic treatment the root channel should be prepared for pin installation, etched with etching gel for not less than 20 seconds, rinsed with water for not less than 20 seconds, dried without overdrying. Then in a cuvette mix in 1:1 proportion main and catalytic liquids of Dual-cure adhesive for enamel and dentin. Time of mixing: 10 seconds. Place the adhesive mixture into cavity, dry with air till liquid stops moving and cure with light of 450 - 500 nm during 20 seconds. The prepared surface should be shiny, dry. The pin should be prepared according to its direction for use.

Then insert the previously mixed "FlowFix DUO" material in the root channel with the use of endo-tip and accurately place therein the prepared pin, holding it firm to avoid displacement of the pin, cure with light for 20-30 seconds. After that start modeling the tooth core.

Attention: avoid contact with eugenol-containing materials.

CONTRAINDICATION

If all rules of use are observed there is no contraindication.

SIDE EFFECT

The material "FlowFix DUO" and Dual-cure adhesive contain urethanes and methacrylates which may cause allergic reaction by patients.

PRECAUTIONARY MEASURES

The material "FlowFix DUO" and Dual-cure adhesive contain urethanes and methacrylates which may cause allergic reaction by patients. In this case the use of these materials must be stopped.

Etching gel contains orthophosphoric acid. Avoid contact with skin, oral mucosa, eyes and clothes. In case of contact of etching gel with these, rinse with large amount of water. Do not allow contact of uncured material and adhesive with eyes and skin, or swallowing them.

Ceramicgel contains hydrofluoric acid. Vapors of hydrofluoric acid cause irritation of respiratory tract, and after prolonged influence may lead to burn. It is necessary to follow the instruction strictly. During etching procedure in the oral cavity the patient, the doctor and his assistant must bear protective glasses, avoid splashing etching gel outside work area. In case of contact of ceramicgel with oral mucosa or skin it necessary to put there immediately the Barrier gel and then wash with large amount of water.

TRANSPORTATION

The material 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 $+(5+25)^{\circ}$ C

STORAGE

"FlowFix DUO", Dual-cure adhesive, Silane primer should be kept in the original packaging in a dry place not exposed to direct sunlight at temperature $+(5+12)^{\circ}$ C.

PRODUCER GUARANTEE

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

SHELF LIFE

Shelf life of the material in a dry place not exposed to direct sunlight if stored in temperature interval $+(5+12)^{\circ}$ C – 2 years from production date. Do not use after expiration of shelf life indicated on packaging

PLACES OF USE

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

DISPOSAL

"FlowFix DUO" material, Dual-cure adhesive, Barrier gel, Silane primer do not require special precautionary measures by disposal. Disposal of syringes with Ceramicgel after use is made after neutralization of remains containing hydrofluoric acid. Neutralization is made by putting remains in 5% water solution of bicarbonate natrium for 15-30 minutes.

Waste is rated as class A risk level (epidemiologically safe waste close to solid household waste)

Producer: "Stomadent LLC"

11 Garshina Street, Tomilino, Moscow region, 140070 Russia

Tel. (+7-495) 514-93-47, 514-93-13 Tel/fax. (+7-495) 514-93-46

E-mail: info@stomadent.ru

www.stomadent.ru