

	ORTHODONTIC FLOW COMPOSITE DENTAL FILLING	Document Number	KK.12
		RELEASE DATE	10.01.2019
		Revision Date	20.09.2024
	USER MANUAL	Revision Number	03

LIGHT CURED COMPOSITE-BASED ORTHODONTIC BRACKET ADHESIVE

1. PRODUCT INFORMATION

It is an orthodontic dental material developed on the basis of composite, polymerized by light, with high adhesion strength and durability, used to fix orthodontic brackets on the tooth surface. Its viscosity is adjusted in such a way that it can easily spread to the pores of the adhesion surface of the bracket and prevent slipping during tooth placement. It is compatible with both metal and ceramic brackets and can be used safely in long-term orthodontic treatments.

2. CONTENT

The product composition includes methacrylate resins (UDMA, TEGDMA), inorganic filling materials, glass, silica, photoinitiator. (70% by weight, 56% by volume)

3. PROPERTIES

- **High Adhesion Strength: Creates** a strong bond between the tooth and the bracket.
- **Controlled Working Time:** Since it is polymerized with light, it gives the physician sufficient working time.
- **Ideal Viscosity:** The adhesion surface of the bracket is adjusted so that it can easily spread into the pores and prevent slipping during tooth placement.
- **Low Polymerization Shrinkage:** Thanks to the high filler ratio it contains, it shows minimum shrinkage effect during hardening.
- Compatible with routine bracket bonding protocols.
- It is compatible with natural tooth color.
- It can be removed without damaging the enamel of the tooth.
- It is one-component, does not require mixing.

4. INDICATIONS

- **Fixing of Orthodontic Brackets: Bonding** metal, ceramic, composite and polycarbonate brackets to the tooth surface.
- **Bonding Orthodontic Tapes: Fixing** special accessories or tubes.
- Fixation of temporary orthodontic devices.

5. CONTRAINDICATIONS

- Methacrylate is contraindicated in patients with a history of severe allergic reactions to resins.
- **Unsuitable Tooth Surfaces:** Weak enamel, dentin surface, and decayed or plaque-covered tooth surfaces.
- **Inadequate Insulation:** Situations where humidity control cannot be achieved.

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6. APPLICATION INSTRUCTIONS

Preparation of the Tooth Surface:

- **Cleaning:** Tooth surfaces are cleaned with a polishing brush and pumice. This removes plaque and organic waste from the surface. After cleaning, the surface is dried with water and air spray.
- **Insulation:** Insulation of the tooth surface is provided with the help of rubber cover or cotton rolls. Insulation increases adhesion success by providing moisture control.
- **Etching:** 35-37% phosphoric acid is applied to the enamel surface of the tooth. The acid is left on the enamel surface **for 15-30 seconds**. After the application of acid, the surface is washed with plenty of water and slightly dried. The surface should take on a matte appearance.

Bonding process:

- **Bonding Agent Application:** The bonding agent is applied as a thin layer to the acidified tooth surface. With a mild air spray, the bonding agent is diluted and the solvent is evaporated. An LED light source (1000-1200mW/cm² power) emitting blue light in a narrow wavelength range between 450-490 nm, 10 sec. irradiation for each tooth, or a HALOGEN light source between 380-500 nm (700mW/cm² power) for 20 seconds for each layer is recommended
- **Application of Adhesive to Bracket:** Composite-based adhesive is applied in an even layer to the bracket base (mesh surface). Care is taken not to overdo the adhesive.
- **Placement of the Bracket:** The adhesive bracket is placed on the tooth surface in the appropriate position. By applying light pressure, the excess adhesive is carried away from the edges.
- **Cleaning the Overflowing Adhesive:** Excess is removed with the help of a fine probe or micro brush.
- **Curing:** An LED light source (1000-1200mW/cm² power) emitting blue light in a narrow wavelength range between 450-490 nm, 10 sec. irradiation for each tooth, or a HALOGEN light source between 380-500 nm (700mW/cm² power) for 20 seconds for each layer is recommended

7. ALERTS

- If any nausea or other allergic reactions occur during administration, discontinue use immediately and seek medical attention.
- Uncured methacrylate resin can cause contact dermatitis and damage to the dental pulp. Avoid contact with skin, eyes and soft tissue. If it comes into contact, clean it thoroughly with water
- If swallowed, drink plenty of water, do not induce vomiting. Consult a doctor immediately.

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- Wear personal protective equipment such as disposable masks, gloves and goggles when working with this product.
- Do not use this product for any purpose other than the treatments outlined in the indications section in this user manual.
- Avoid the use of eugenol, eugenol may disrupt the polymerization of the composite or cause discoloration, so zinc oxide should not be used with cement containing eugenol.
- This product is intended for use in dentistry only.
- Attention should be paid to the rules of disinfection so as not to lead to cross-contamination between patients.
- Do not use damaged syringe tubes.
- Retract the plunger after application to prevent unwanted flow of the composite from the tip.
- Protect from visible light before use.

8. PACKAGING

- Orthodontic Flow composite is packaged as 2g, 3g, 500g and 1000g.

9. STORAGE CONDITIONS

- The product should be stored in a cool, dry and dark environment.
- Store syringes between 15 and 25 degrees Celsius at a relative humidity of 30% +/-5%.
- Store dry, cool and not exposed to direct sunlight.
- The expiry date is indicated on all packaging. Do not use after the expiration date.
- Shelf life is 3 years.

 FSM PROFESSIONAL DENTAL PRODUCTION	ORTHODONTIC FLOW COMPOSITE DENTAL FILLING	Document Number	KK.12
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10. SYMBOLS

	Production Date
	Producer
	Refer to the user manual
	Lot number
	Temperature display
	Attention
	CE Standard
	Protect from sunlight
	Non-sterile mark
	Store in a dry place
	It is disposable
	DEHP Free
	LATEX-Free
	Expiry Date
	Relative humidity display

11. COMPANY INFORMATION

Manufacturer: FSM DENTAL MEDİKAL MAKİNA SANAYİ VE TİC.LTD.

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