



**TECHNICAL DATA SHEET**  
**SELF-CURING ACRYLIC RESIN NOVACRYL FLOW®**  
**DPFTPT-013**

**1. GENERALITIES OF THE PRODUCT**

Methacrylate polymers have become very popular in dentistry because they are easily processed using relatively simple techniques, and they offer the essential properties and features required for oral restoration.

Novacryl Flow® self-curing acrylic resin: the mixture composition (polymer and monomer) are used for temporary repairs and restorations, crowns and bridges. They are chemically activated by adding a tertiary amine to the liquid component and do not require applying heat.

**2. INFORMATION ABOUT COMPOSITION**

- Self-curing acrylic Polymer Components: Self-curing acrylic (Type II):  
Ethyl and methyl methacrylate copolymer.  
Pigments.
- Self-curing acrylic monomer component (Type II):  
Methyl methacrylate.  
Ethylene Glycol Dimethacrylate.  
Amine type chemical initiator.

**3. PROPERTIES OF THE PRODUCT**

The physical properties of self-curing Novacryl Flow® polymers are measured in the Quality Control Laboratory using specialized and calibrated equipment based on the ISO 20795 standard for finished product.

The most relevant physical properties are shown in the following table:

Parameter	Requirement	Experiment Results
Absorption	Not greater than 32 µg/mm <sup>3</sup>	17.59
Solubility	Not greater than 8.0 µg/mm <sup>3</sup>	3.09
Flexural strength	Minimum 60 MPa	63.88
Flexural modulus	Minimum 1500 MPa	1611
Residual monomer	Maximum 4.5% by weight	3.19

Other properties are assessed qualitatively, such as: Color, color stability, suitability for polishing, porosity, and they are all within the acceptance limits.

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**4. USES AND APPLICATIONS**

The self-curing polymer Novacryl Flow® (polymer and monomer) is suitable for the preparation and repair of temporary restorations, crowns and bridges.

Its features are:

- The preparation and repair of the various acrylic structures can be performed in a very short time, while allowing sufficient time for manipulation.
- The curing does not require thermal treatment for its polymerization.
- It can be easily polished to recover its shine.
- When used in the indicated proportions of polymer and monomer, vertical and linear contractions to the acrylic structure are avoided.

**5. QUALITY ASSURANCE OF THE PRODUCT**

The acrylic resins are manufactured with high-quality raw materials by means of a fully standardized manufacturing process that is ISO 9001 and ISO 13485 certified. Additionally, the Quality Control Laboratory verifies fulfillment of the requirements of ISO 20795 standard for finished products using specialized equipment.

**Water Absorption and Solubility:** Verify the amount of water absorbed by the acrylic resins or the amount of weight they lose when they are immersed in water. The acrylic is not soluble in saliva or any other mouth liquid.

**Porosity:** The processed acrylic is free from imperfections and porosity.

**Flexural Strength and Flexural Modulus:** It measures the degree of deformation of the acrylic resins to resist the forces that take place during chewing; in addition, it measures the resist forces of the resin until the fracture that guarantees its good clinical performance.

**Translucency:** It must be possible to see an object on the opposite side of the test tube with acrylic.

**Residual Monomer:** The amount of monomer left over during prosthesis construction must be minimal to ensure that no irritation occurs in mouth tissues.

**6. INSTRUCTIONS FOR USE**

**Direct Method:** Temporary structures using self-curing Novacryl Flow®.

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- Before preparing the teeth, take a full impression of the mouth using silicone or alginate. The alginate impression should be wrapped in a wet towel until it is ready to be emptied.
- Trim a sufficient amount of the alginate from the impression in all bridge areas. If the impression was taken with alginate, wash it with warm water and remove excess water by smoothly blowing with air.
- Select the color of the Novacryl Flow® polymer.
- Cover the supporting teeth and gingival tissues with a thin layer of vaseline, which helps lubricate and facilitates the removal of the temporary Novacryl Flow® bridge. Mix according to the instructions, add the mix to the impression and position it in the patient's mouth.
- Before to begin the exothermic reaction, remove the impression from the mouth. Let the temporary Novacryl Flow bridge or crown polymerize in the impression. Do not allow it polymerize in the mouth directly, remove the Novacryl Flow bridge from the impression.
- Place carefully on the bridge or crown on the teeth suitable and stable to the appropriate occlusion. When the fit and occlusion are satisfactory, the Novacryl Flow® bridge or crown. After cementation, check the occlusion again.

**Indirect Method:** Temporary structures using self-curing Novacryl Flow®

- Shape the bridge area if it is not yet defined and take off about 0.5 mm from the supporting teeth in a manner similar to the preparation for crowns but with a larger diameter.
- Select the color of the Novacryl Flow® polymer.
- Cover the corresponding area in the plaster model, Novafoil acrylic-plaster separator that facilitates the removal of the temporary bridge. Prepare the mixture according to the indicated proportions, immediately empty the mixture in the corresponding area and position it in the model.
- Before beginning the exothermic reaction, remove the bridge or crown from the model and insert them again to avoid retaining the material in the plaster model. Adapt the crown again in the plaster clinical model and let it polymerize completely.
- Place the bridge or crown carefully on the plaster model and establish the appropriate occlusion.

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**7. THE DIRECT AND INDIRECT TECHNIQUE.**

The Self-curing Acrylic Novacryl Flow monomer must be used with the Self-curing acrylic Novacryl Flow polymer, to make the acrylic.

**7.1 The proportions used for the mix are:**

Per weight: two parts of Self-curing Novacryl Flow® polymer by one part of Self-curing Novacryl monomer.

Per volume: three parts of Self-curing Novacryl Flow® polymer by one of Self-curing Novacryl Flow® liquid in terms of volume.

**7.2 Preparing the mix**

- The mixture is prepared in a suitable container (dappen or glass, porcelain or silicone container).
- The dosed polymer is poured on the monomer in the proper proportions, and is mixed in a cross-wise way continuously for about 30 seconds approximately, to avoid the air generation and ensure the polymer particles are fully incorporated in the monomer.
- Cover the container to avoid the inclusion of air until the mixture reaches a fluid consistency.
- Empty the mixture immediately in the area corresponding to the pontics and support teeth of the impression, which should slightly overfill.
- Before starting the exothermic reaction, remove the bridge or crown from the model and insert them again to avoid retaining the material in the plaster model. Adapt the crown again in the plaster clinical model and let it polymerize completely.

**7.3 Polymerization**

Self-curing acrylic Novacryl Flow® curing in approximately 7 minutes. Time may vary depending on the room temperature conditions.

**7.4 Polishing**

- Place carefully on the bridge or crown on the teeth suitable and stable to the appropriate occlusion.

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- The anatomy and contour are refined as necessary. If you want to get a better characterization of the bridge or crown, apply Novacryl Flow® incisal to degrade the enamel simulation of the teeth.

**8. COMMERCIAL PRESENTATIONS**

- Novacryl Flow® Self-curing polymer:

Bottle 40 g, 60 g, 125 g, 250 g, 500 g, 1000 g, 10 kg, 20 kg, 125 kg.

- Novacryl Flow® Self-curing Liquid:

Bottle 55 ml, 110 ml, 250 ml, 500 ml and 1000 ml.

- Presentations in Kit for Polymer and Liquid Novacryl Flow® Autopolimerizable.

Kit: Cardboard box containing 110 ml bottle of liquid self-curing acrylic (2 bottles of 55 ml) plus 160 g of acrylic self-curing powder (4 bottles of 40 g).

Kit: Cardboard box containing 110 ml bottle of liquid self-curing acrylic (2 bottles of 55 ml) plus 320 g of polymeric self-curing acrylic (8 bottles of 40 g).

Kit: 60 g of polymer and 55 ml of monomer.

Kit: 500 g of polymer and 250 ml of monomer.

Kit: 1000 g of polymer and 500 ml of monomer.

**7. EXPIRATION DATE**

Novacryl Flow® Self-curing polymer: Four (4) years.

Novacryl Flow® Self-curing Monomer: Two (2) years.

**8. STORAGE AND PRESERVATION CONDITIONS**

- Storage: Maintain in a cool and well-ventilated area (room temperature).
- Keep away from spark or fire sources.
- Do not smoke.
- Keep away from direct sunlight and heat.
- Store away from oxidizing agents, acids, bases and polymerization initiators.
- Do not store for extended periods of time.

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