



TECHNICAL DATA SHEET
SELF-CURING ACRYLIC RESIN DURACRYL FLOW®
DPFTPT-012

1. GENERALITIES OF THE PRODUCT

Methacrylate polymers have had great popularity in dentistry because they are easily processed using relatively simple techniques they have the ability to provide the essential properties and characteristics necessary for use in oral restoration.

Duracryl Flow® is a self-curing castable resin for direct or indirect work in the development of secondary elements (patterns) used in different types of prosthetic restorations. It is a safe and easy to handle product.

2. INFORMATION ABOUT COMPOSITION

- Polymer Components: Self-Curing acrylic (Type II).
Ethyl and methyl methacrylate copolymer.
Red pigments.
Additives.
- Self-curing monomer component (Type II).
Methylmethacrylate.
Ethyleneglycol dimethacrylate.
Amine type chemical initializer.

3. PROPERTIES OF THE PRODUCT

The physical properties of the polymers are in the Quality Control laboratory, through the use of specialized and calibrated equipment, based on the ISO 20795 standard for finished product.

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

Parameters	Request	Experimental Result
Absorption in Water	It must not exceed a 32 $\mu\text{g}/\text{mm}^3$	18
Water solubility	It must not exceed 8.0 $\mu\text{g}/\text{mm}^3$	4.82
Flexural strength	Minimum 60 MPa	60.55
Bending module	Minimum 1500 MPa	1623.67
Residual Monomer	Maximum 4.5% in weigh	3.99

Other properties are evaluated qualitatively as: Color, color stability, polishing capacity, translucency, porosity, meet the minimum acceptance parameters.

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4. USES AND CHARACTERISTICS

Duracryl Flow® acrylic is used exclusively by Dentistry professional personnel in the recommended applications.

The composition of the self-curing acrylic resin Duracryl Flow® (monomer and polymer) is used to make models of crowns, inlays, intra-radicular retainers, palatal or lingual bars, connectors, hooks and maryland bridges. It also allows the preparation of temporary joints for welding and in superstructure constructions for implants.



Their characteristics are:

- Dimensional stability. A faithful copy is needed, so that the final product, already cast, has the same characteristics as the original pattern.
- It does not flow outside the areas of application and does not present problems if it is used in large structures.
- The red color allows a better contrast between the tooth, the oral cavity and the core pattern that we are making.
- Waste-free calcining to obtain a very fine casting surface.
- Does not require a heat treatment to achieve polymerization.

5. QUALITY ASSURANCE OF THE PRODUCT

Acrylic resins are manufactured with high quality raw materials and through a fully standardized production process and certified under ISO 9001 and ISO 13485. In addition, in the Quality Control laboratory, compliance with the requirements of the ISO standard is checked 20795 for finished product, by means of specialized equipment.

Water Absorption and Solubility: Check the amount of water absorbed by acrylic resins when immersed in water or the amount of weight they lose. Acrylic is insoluble in saliva or in any other fluid found in the mouth.

Porosity: The processed acrylic presents a surface free of imperfections and porosities.

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Flexural Strength and Bending Module: Measures the degree of deformation of acrylic resins to support the occlusal forces exerted at the time of use, additionally measures the strength of a resin to fracture that ensures good clinical performance.

Translucency: An object on the opposite side of the acrylic specimen shall be visible.

Residual Monomer: The content of monomer that can remain during the elaboration of the prosthesis must be minimum to guarantee the absence of irritations in the buccal tissues.

6. INSTRUCTIONS FOR USE

6.1 Direct and indirect techniques

- **Direct:** Duracryl Flow® acrylic resin is used in the office by the dentist directly in the patient. Special care should be taken to avoid contact with the skin or oral mucosa. In case of accidental contact, the material should be removed immediately and the surrounding area should be generously cleaned with water.
- **Indirect:** The Duracryl Flow® acrylic resin is used in the laboratory by the dental laboratory in a plaster model.

6.2 Mix preparation

The mixture is prepared in a suitable container (dappen or glass, porcelain or silicone container).

6.3 Preparation for coating or modeling structures

In either case use the brush, to be able to take a small amount of polymer, moisten the brush tip with monomer and then impregnate with polymer, in this way you get a minimum portion that can be deposited on the structure or preparation in the model, repeat the procedure as many times as necessary until you build the desired structure. After the tip of the brush has been introduced into the polymer, the small drop that forms should be slightly damp and have a shiny surface.

It is recommended to clean the brush with Duracryl Flow® monomer during use if necessary and after finishing the job.

6.4 Polymerization

Fast polymerization: approximately 4 minutes. These times may vary according to the ambient temperature.

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6.5 Control of the surface of the model

Once the resin has polymerized, the patterned structure must be carefully removed, check according to the case, marginal seal and internal surface or thickness.

6.6 Fine adjustment

- If it is necessary to make adjustments, reposition the model on the structure and repeat the procedure to give better adaptation.
- Finally the acrylic structure must be coated in refractory materials for the elaboration of the structure by means of the technique of porcelain injection or metal casting.

7. COMMERCIAL PRESENTATIONS

DURACRYL FLOW® Self-curing polymer individual:

Container of 10 g, 20 g, 40 g, 60 g, 125 g, 250 g, 500g, y 1000 g.

DURACRYL FLOW® Self-curing kit:

125 g bottle of self-curing acrylic polymer + 110 ml bottle of self-curing acrylic monomer.

250 g bottle of self-curing acrylic polymer + 110 ml bottle of self-curing acrylic monomer.

500 g bottle of self-curing acrylic polymer + 250 ml bottle of self-curing acrylic monomer (100 units).

1000 g of self-curing acrylic polymer + 500 ml bottle of self-curing monomer (100 units).

60 g bottle of self-curing acrylic polymer + 55 ml bottle of self-curing acrylic monomer (100 units)

30 g bottles of self-curing acrylic polymer + 15 ml bottle of self-curing acrylic monomer.

4 bottles per 40 g of self-curing acrylic polymer + 2 bottles per 55 ml of self-curing acrylic monomer (100 units).

8 bottles per 40 g of self-curing acrylic polymer + 2 bottles per 55 ml of self-curing acrylic monomer (100 units).

Sample without commercial value in a 30 g polyethylene bottle, sample without commercial value kit containing a 30 g bottle of self-curing acrylic polymer + 15ml bottle of self-curing acrylic monomer (100 units).

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DURACRYL FLOW® Self-curing monomer individual:

Amber glass bottle: 15 ml, 30 ml, 55 ml, 110 ml, 250 ml, 500 ml and 1000 ml, 8 oz, 32 oz.
High density polyethylene container: 1 gallon.
Metallic drum: 200 L

8. EXPIRATION DATE

Duracryl Flow® Self-Curing Polymer: Four (4) years.
Duracryl Flow® Self-Curing Monomer: Two (2) years.

9. STORAGE AND PRESERVATION CONDITIONS.

- Storage: Keep the product in a cool and well-ventilated place
- Keep away from any flame or spark source.
- Keep it away from heat and direct sunlight.
- No Smoking.
- Store away from oxidants, acids, bases and polymerization initiators.
- Do not store for long periods of time.

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