Address: Cra. 53 N° 50-09
Guarne (Antioquia) COLOMBIA.
Telephones: (57-60-4) 550 00 00 - 403 87 60
Fax: (57-60-4) 551 31 34
infocolombia@newstetic.com

TECHNICAL DATA SHEET
SELF-CURING ACRYLIC RESIN DURACRYL® AND 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® / 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 (type II):
  Ethyl and methyl methacrylate copolymer.
  Pigments.
  Additives.

- Monomer components (type II):
  Methyl methacrylate.
  Ethyleneglycol dimethacrylate.
  Amine type chemical initializer.

3. PROPERTIES OF THE PRODUCT

The physical and chemical properties of the polymers are checked in the Quality Control Laboratory through the use of specialized and calibrated equipment and based on the ISO 20795-1 standard for the 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 µg/mm^3	18
Water solubility	It must not exceed 8.0 µg/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 and porosity, meet the minimum acceptance parameters.

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4. USES AND APPLICATIONS

This acrylic resin is used exclusively by dentistry professional personnel in the recommended applications. The composition of these acrylic resins is ideal to be 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 main 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

The product is 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 20795-1 for finished product by means of specialized equipment.

- **Water absorption and solubility**: It checks the amount of water absorbed by acrylic resin 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.
- **Flexural strength and bending module:** It 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.

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6. INSTRUCTIONS FOR USE

6.1 Direct and indirect techniques

- **Direct:** The 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 acrylic resin is used in the laboratory by the dental laboratory in a plaster model.

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 monomer during use if necessary and after finishing the job.

6.2 Polymerization

Fast polymerization in 4 minutes approximately. This time may vary according to the ambient temperature.

7. COMMERCIAL PRESENTATIONS

- **Individual polymer:**

Bottle per: 40 g, 60 g, 125 g, 250 g, 500 g or 1000 g.
Drum per 10 kg, 20 kg, 125 kg
Polyethylene bottle; plastic or metal drum

- **Individual monomer:**

Bottle per: 15 ml, 30 ml, 55 ml, 110 ml, 250 ml, 500 ml, 1000 ml, 8 oz, 32 oz, 1 gallon; Drum per 200 L.
Glass bottle; metallic drum

- **Kit:**

Powder self-curing acrylic + liquid self-curing acrylic:

30 g + 15 ml
60 g + 55 ml

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125 g + 110 ml
250 g + 110 ml
500 g + 250 ml
1000 g + 500 ml
4 bottles per 40 g c/u de + 2 bottles per 55 ml each one
8 bottles per 40 g c/u de + 2 bottles per 55 ml each one
Free sample (30 g + 15 ml)
Free sample (60 g + 55 ml)

8. STORAGE AND PRESERVATION CONDITIONS.

- Keep the product in a cool and well-ventilated place, away from any flame, spark source, heat and direct sunlight.
- No smoking.
- Store away from oxidants, acids, bases and polymerization initiators.
- Do not store at temperatures above 30 °C (86 °F).