



TECHNICAL DATA SHEET POUR TYPE ACRYLIC RESIN PDFTPT-082

1 PRODUCT OVERVIEW

Methacrylate polymers have become very popular 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. One of the main applications is for the elaboration of dental restorations such as partial and removable total prostheses. These prostheses are made up of artificial teeth placed on an acrylic base as a support to maintain contact with the oral tissues, rehabilitating the chewing, phonetic and aesthetic function. This type of acrylic resin allows to polymerize the dental prosthesis in just 20 minutes, thus facilitating the work time in the laboratory, in addition, it gives a better finish since the wax-up is copied with agar (in liquid state) instead of plaster, therefore the prosthesis is cleaner.

2 COMPOSITION INFORMATION

- Polymer components (Type II):
Polymethyl methacrylate
Pigments
Polyester fibers (if a reference with mottled appearance is required)
Additives
- Monomer components (Type II):
Methyl methacrylate
Dimethacrylate ethylene glycol
Amine-type chemical initiator

3 PRODUCT PROPERTIES

The physical properties of polymers are measured in the Quality Control Laboratory by using specialized and calibrated equipment, based on the ISO 20795-1 standard. The following table shows the most relevant physical properties.

Parameter	Requirement	Experimental Result
Absorption	It must not exceed 32 $\mu\text{g}/\text{mm}^3$	22.8
Solubility	It must not exceed 8.0 $\mu\text{g}/\text{mm}^3$	0.77
Flexural strength	Minimum 60 MPa	62.18
Flexural module	Minimum 1500 MPa	2358.27
Residual Monomer	Maximum 4.5% in weight	2.24

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4 USE AND APPLICATIONS

The composition of the self-curing acrylic resins for using by means of pouring technique (monomer and polymer) Veracril® Pour, Opti-Cryl® Pour are indicated for the preparation of dental restorations such as total, partial, and removable prostheses. The product has following characteristics:

- The time required for the preparation of the dental restoration is one hour and allows an optimal working time for its pouring.
- It requires a heat treatment by means of pressurization equipment.
- It is easy to polish, allowing it to regain its shine.
- By using the indicated polymer and monomer ratio, vertical contractions and linear contractions that the acrylic structure may suffer are avoided.
- Provides essential properties and characteristics necessary for use in the oral cavity.
- Easy to manipulate.
- They show sufficient translucency to give the natural appearance of the replaced oral tissues.

5 PRODUCT QUALITY ASSURANCE

Acrylic resins are manufactured with raw materials of the highest quality, through a completely standardized productive process certified under both ISO 9001 and ISO 13485. Besides, the compliance with the requirements of the ISO 20795-1 standard is verified in the Quality Control Laboratory for the finished product by means of specialized equipment.

Water absorption and solubility: Verifies the amount of water that the acrylic resins absorb or the amount of weight they lose when immersed in water. Acrylic is insoluble in saliva or in any other fluid present in the mouth.

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

Bending strength and flexure module: They measure the degree of deformation of acrylic resins to be able to support occlusal forces exerted at the time of use. Additionally, they measure the force a resin supports until fracture, which guarantees their good clinical performance.

Translucency: An object must be visible when placed on the opposite side of the acrylic test piece.

Residual Monomer: The content of monomer that may remain during the preparation of the prosthesis must be minimum in order to ensure absence of irritation in the mouth tissues.

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Class	Page	Approved by:		Update:	Version
E	2 of 4	Technical Director of MD		2022-08-23	03

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6 INSTRUCTIONS FOR USE

Waxing and flasking:

- To use the conventional tooth waxing technique.
- To place the pouring sprues correctly for the acrylic resin on the back-palate side running it into the flask perforations.
- To hydrate the model in water at room temperature for approximately 30 seconds.
- To fix the model to the base of the flask with the help of plasticine.
- To follow the instructions for the silicone or hydrocolloid duplicating material.
- Wash the wax and teeth, when the hydrocolloid has hardened.
- Use 2.5 parts of polymer (powder) and 1 part of monomer (liquid) measured in volume. Mix gently until a semi-liquid consistency (honey consistency) is obtained.
- Pour the mixture through the holes of the flask.
- Place the muffle inside the pressurizer in vertical position taking care that the water does not touch the acrylic resin. Apply 30 pounds of pressure at a temperature of 60°C for 20 min.

For more information see the instructions for use of the product.

7 COMMERCIAL PRESENTATIONS

Polymer:

30, 40, 60, 125, 250, 500 and 1000 g; 2.5, 10, 20, 25 and 125 kg.

Monomer:

15, 30, 55, 110, 250, 500 and 1000 ml; 1 gallon, 200 L; 8 and 32 oz.

Kits:

1000 g + 500 ml

500 g + 250 ml

250 g + 110 ml

125 g + 110 ml

60 g + 55 ml

30 g + 15 ml

4 bottles per 40 g each + 2 bottles per 55 ml each

8 bottles per 40 g each + 2 bottles per 55 ml each

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Class	Page	Approved by:		Update:	Version
E	3 of 4	Technical Director of MD		2022-08-23	03

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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

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10. STORAGE AND PRESERVATION CONDITIONS

- Keep the product in a cool and well-ventilated place. Do not exceed 30 °C.
- Keep it away from any flame or source of spark, heat and direct sunlight.
- No smoking.
- Store it away from oxidants, acids, bases and polymerization initiators.
- Do not store for long periods of time that exceed the useful life of the product.

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E	4 of 4	Technical Director of MD		2022-08-23	03

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