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TECHNICAL DATA SHEET OCRYL® SELF-CURING ACRYLIC RESIN DPFTPT-069

1. GENERALITIES OF THE PRODUCT

Polymers of methacrylate have become very popular in dentistry because of their easily processing capacity with relatively simple techniques. They have proved to provide the essential properties and the necessary characteristics to be used in oral restorations.

The Ocryl® self-polymerized acrylic resin is chemically activated by the addition of a tertiary amine to the liquid component, without require the use of thermal energy. It is used for the elaboration of orthodontic and orthopedic appliances.

2. INFORMATION ABOUT COMPOSITION

- Polymer components (Type II):
Polymethyl methacrylate
Pigments
Additives
- Monomer components (Type II):
Methyl methacrylate
Ethylene glycol dimethacrylate
Chemical initiator (amine type)
Additives

3. PROPERTIES OF THE PRODUCT

Physical properties of polymers are measured in New Stetic's Quality Control Laboratory by means of well-gauged high specialized equipment, according to ISO standard 20795-1 for the finished product. The most relevant physical properties are shown in the following chart:

Parameters	Requirements	Experimental results
Absorption	Not higher than 32 µg/mm ³	22.26
Solubility	Not higher than 8.0 µg/mm ³	3.65
Flexure strength	60 MPa minimum	60.75
Flexural modulus	1500 MPa minimum	2423.04
Residual monomer content	4.5% maximum (in weight)	3.51

Other properties are evaluated qualitatively, such as: color comparison, color stability, polishability, translucency and porosity are within acceptance limits.

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4. USE AND APPLICATIONS

The composition of O-cryl® self-curing acrylic resin is intended for the elaboration of several orthodontic and orthopedic appliances; these acrylic bases in combination with other complements, help to correct the sthetic, functionality, unsuitable habits and prevent the bad dental position. The main characteristics are as follow:

- The period of time required for the elaboration of the repairing of different acrylic structures of the orthodontic and orthopedic appliances is minimum, and it allows an optimum working time for its manipulation.
- Complements as retainers, springs and screws can be incorporated into the acrylic.
- It does not require heat treatment for its polymerization process.
- It allows an easy polishing to recover its gloss.
- Using the polymer-monomer ratio as it is indicated, the possible vertical and linear contractions of the acrylic structure can be avoided.

5. QUALITY ASSURANCE OF THE PRODUCT

Acrylic resins are made from the highest quality raw materials through a completely standardized production process which conforms to ISO Standard 9001 and ISO Standar 13485. Moreover, in its Quality Control Laboratory, New Stetic verifies the compliance of ISO Standard 20795-1 according to the quality requisites for the finished product, using specialized equipment. The most representative tests are listed below:

Water absorption and solubility: The amount of water that can be absorbed by acrylic resins or the amount of weight that they can lose when are immersed in water. Acrylic is not soluble in saliva or in any other oral fluid.

Porosity: The surface of processed acrylics is free from imperfections and porosity.

Flexural strength and flexural modulus: The degree of distortion suffered by acrylic resins under the occlusion forces that are applied during the use; additionally, the force supported by a resin until its fracture is also measured. This aspect ensures the good clinical performance of resins.

Translucency: An object placed at the opposite side of the test tube containing acrylic resin must be visible.

Residual monomer: The amount of monomer that can remained during the prosthesis elaboration, must be minimum in order to guarantee the absence of irritations in oral tissues.

6. INSTRUCTIONS FOR USE

- The acrylic dough is prepared in an adequate container (a dappen dish or a glass, silicon, or porcelain container).

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- The dosed polymer is poured into the monomer in the indicated ratios, and it 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.
- Proceed to pour the dough in its fluid state over the model, in order to obtain a total covering of the retentions of the functional wires.
- The mixture is molded into the palate of the model, wetting in the mixture with the self polymerized acrylic liquid.
- The excesses are cut in order to mold the teeth necks and the limit of the acrylic support in the palate.
- Cover the acrylic model with a container, which can be with the container used for mixing the cast, while the exothermal reaction of the material is done.

7. COMMERCIAL PRESENTATIONS

Monomer:

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

Polymer:

Bottles per 30, 40, 60, 125, 250, 500 and 1000 g; 2.5, 10, 20, 25 and 125 kg; 1, 5, 22, 44 and 55 lb.

Kits:

Bottle per 1000 g + 500 ml
Bottle per 500 g + 250 ml
Bottle per 250 g + 110 ml
Bottle per 125 g + 110 ml
Bottle per 60 g + 55 ml
Bottle per 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
Free sample with a bottle per 30 g + 15 ml

8. STORAGE AND PRESERVATION CONDITIONS

- Keep the product in a fresh and well-ventilated area, away from any flame or spark source, heat and direct sunlight.
- Do not smoke.
- Store it away from oxidants, acids, bases, and polymerization initiators.
- Do not store at temperatures above 30 °C (86 °F).

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