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TECHNICAL DATA SHEET
MICROWAVE FLASK
DPFTPT-073

1. GENERALATIES OF THE PRODUCT

Microwave polymerization process involves the generation of heat within the resin through electromagnetic waves produced by a generator called magnetron. Methyl methacrylate molecules are able to orient into the electromagnetic field at a frequency of 2450 MHz, and change its direction 5 billion times per second, approximately, which implies numerous intermolecular collisions causing a rapid polymerization; consequently, the process can be performed in a relatively short time in comparison with other conventional techniques (temperature curve in a thermostat bath).

The flask used for this purpose is made of an engineering polymer through an injection process. This polymer provides to the flask high mechanical strength, chemical and thermal characteristics, and a dimensional stability which is necessary for a good performance in its use.

2. INFORMACTION OF COMPOSITION

The flask is made of polyphenylene sulfide (PPS) reinforced with fiberglass and it is assembled using the stainless-steel screws and bolts. The parts of the flask are shown in following pictures.


Base


Opposite flask


Screws and hex wrench


Expulsion disc


Disc for pressing


Assembled flask

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3. PROPERTIES OF THE PRODUCT

The microwave flask, thanks to its material, has the following features:

- Thermal resistance.
- Chemical and corrosion resistance.
- High mechanical properties.
- Hot dimensional stability.
- Hardness and rigidity at elevated temperatures.
- Very low water absorption.
- Flame retardant.

In addition, thanks to its design, the flask can be manipulated easily and comfortably in different stages that involved the elaboration of a dental prosthesis by microwaves; further, it can be used in a wide commercial flasks variety.

4. USES AND APPLICATIONS

This product is intended for the elaboration of total or temporal acrylic dental prosthesis polymerized by microwaves, according to the manufacturer's instructions.

5. QUALITY ASSURANCE OF THE PRODUCT

Following parameters are evaluated in each batch in order to ensure the proper performance of the flask in the use.

- Appearance.
- Assembly.
- Weight.
- Compressive strength.
- Flexural strength.
- Polymerization performance.

6. USE INSTRUCTIONS

This product is intended for the fabrication of microwave polymerized temporary or definitive acrylic dental structures, according to the instructions for use of the product.

- Never exceed the prescribed loads for pressing the flask.

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- If the laboratory does not have a press with gauge, the flask must be closed applying pressure enough to allow the removal of excess material acrylic, avoiding excessive forces that can damage the flask.
- Never do the pressing with screws placed. These must be placed in the flask under pressure and using the key included with the product. The screws must not be tightened excessively.
- Press placing the disk for pressing between the top part of the flask and the press, in that way avoiding possible fractures as a result of excessive charges.
- The cooling of the flask must be performed at room temperature, never performs it sudden cooling in cold water.
- The opening of the flask must be performed by prying in the lateral grooves of the body of the flask. Avoid using sharp tools that could damage the product.
- To extract the flask use a rubber or plastic hammer, never metal hammer, avoiding hits in points different from expulsion disc. Do not hit the hot flask.

7. COMMERCIAL PRESENTATIONS

The product comes in box per unity, with all constitutive elements.

8. STORAGE AND PRESERVATION CONDITIONS

The product, while not in use, must stay in a cool and dry place, away from exposure to both harsh chemicals, heat and ignition sources.