Acrylic resins result from a mixture of powdered polymers and liquid monomers. They are used for the making of most dental prostheses such as partial or total denture bases, artificial teeth, orthodontic plates, temporary protectors and individual impression trays.

A dental prosthesis is mainly used for restoring the patient's chewing functions. It is composed of artificial teeth that are adhered to an acrylic base which will be in direct contact with oral tissues.

Some basic features of acrylic denture bases are: biocompatibility with oral tissues, dimensional stability, easy handling, color compatibility with oral tissues, and easy washing, among others.
DEFINITION OF THIS PRODUCT

Acrylic resins are made of polymethyl methacrylate, a solid transparent material of spherical form that can be pigmented until achieving any shade or translucency degree to be used in dental appliances, and methyl methacrylate, a liquid monomer.

When the powder and the liquid are mixed in the indicated ratios, an easily manipulated dough is formed. This acrylic dough can be molded in a previously-prepared flask in which the polymerization process is completed. The resulting prosthesis is ready to be polished and used.

CHARACTERISTICS

- Acrylic resins can be molded in complex forms with the use of pressure and heat.
- They are translucent and biocompatible;
- They do not lose their color or get pigmented in time, and are dimensionally stable.
- They are easy to manipulate;
- In their preparation process, they pass through these two phases:
  - Filamentous phase
  - Plastic phase.

PHYSICAL PROPERTIES AND QUALITY CONTROL

The different properties of acrylics are evaluated in New Stetic’s Quality Control Laboratory according to ISO Standard 1567.

Water Absorption and Solubility
The aim of this test is to determine the maximum gain or loss in weight per volume unit of acrylic, water absorption and solubility, respectively, are accurately tested while the structure stays during a certain period of time in moisture conditions at body temperature. Acrylic is not soluble in saliva or in any other oral fluid.

Porosity
Porosity of material is evaluated through the use of fabricated acrylic plates with a surface that is free from imperfections and porosities.

Flexural Strength and Flexural Modulus
Flexibility of material is evaluated through the use of test-tubes made in form of plates, in order to ensure the material’s resistance to fractures when the finished product is used during the chewing activity.

Color Stability
A heat-polymerized acrylic sample is exposed to ultraviolet rays and it is later compared to an acrylic pattern sample not exposed to UV rays. There must not be any difference in color between the two samples.

Translucence
An object placed at the opposite side of an acrylic test-tube must be visible.

Residual Monomer Content
A processed acrylic sample is carefully tested in order to determine the amount of monomer content that remains after the making of a prosthesis. This residual monomer content must be minimal to ensure the absence of irritations of oral tissues.
ADVANTAGES
- The size of the fine particles.
- A finished prosthesis shows a high gloss and excellent surface finish.
- Homogeneous pink colors with no veins.

COMMERCIAL PRESENTATIONS

VERACRIL®
OPTI-CRYL®

Powder:

<table>
<thead>
<tr>
<th>POWDER</th>
<th>60 g Bottle</th>
<th>125 g Bottle</th>
<th>250 g Bottle</th>
<th>500 g Bottle</th>
<th>1000 g Bottle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Box per 196 bottles</td>
<td>Box per 147 bottles</td>
<td>Box per 30 bottles</td>
<td>Box per 50 bottles</td>
<td>Box per 15 bottles</td>
</tr>
<tr>
<td>MASTER BOX</td>
<td>36.0 x 36.0 x 30.2</td>
<td>33.8 x 33.8 x 33.8</td>
<td>39.8 x 24.8 x 27.3</td>
<td>56.8 x 38.8 x 35.6</td>
<td>52.8 x 32.8 x 19.3</td>
</tr>
<tr>
<td></td>
<td>15.6 k</td>
<td>22.1 k</td>
<td>9.6 k</td>
<td>28.62 k</td>
<td>17.7 k</td>
</tr>
</tbody>
</table>

Drum: X 20 k - 125k

Liquid:

<table>
<thead>
<tr>
<th>LIQUID</th>
<th>55 ml Bottle</th>
<th>110 ml Bottle</th>
<th>250 ml Bottle</th>
<th>500 ml Bottle</th>
<th>1000 ml Bottle</th>
<th>Gallon (3785 ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Box per 200 bottles</td>
<td>Box per 100 bottles</td>
<td>Box per 50 bottles</td>
<td>Box per 25 bottles</td>
<td>Box per 12 bottles</td>
<td>Box per 4 gallons</td>
</tr>
<tr>
<td>MASTER BOX</td>
<td>49 x 25.2 x 36</td>
<td>56.5 x 29 x 23.5</td>
<td>36 x 36 x 30.2</td>
<td>21 x 42.5 x 42.5</td>
<td>39 x 29.5 x 29.5</td>
<td>30.5 x 30.5 x 30.5</td>
</tr>
<tr>
<td></td>
<td>24.3 k</td>
<td>22 k</td>
<td>21 k</td>
<td>20.13 k</td>
<td>15 k</td>
<td>14.9 k</td>
</tr>
</tbody>
</table>

NOVACRYL®
-just for export-

INDIVIDUAL

<table>
<thead>
<tr>
<th>POWDER</th>
<th>40 g Bottle</th>
<th>8 bottles with 40 g of powder + 2 55 ml bottles</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUID</td>
<td>55 ml Bottle</td>
<td></td>
</tr>
</tbody>
</table>

KIT

<table>
<thead>
<tr>
<th>POWDER</th>
<th>40 g bottle</th>
<th>4 bottles with 40 g of powder + 2 bottles with 55 ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUID</td>
<td>55 ml bottle</td>
<td></td>
</tr>
</tbody>
</table>

DURACRYL®

<table>
<thead>
<tr>
<th>Powder</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIT</td>
<td>60 g bottle</td>
</tr>
</tbody>
</table>

EZ CRYL®

<table>
<thead>
<tr>
<th>Powder</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIT</td>
<td>500 g bottle</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Master Box</th>
<th>56.3 X 38.8 X 35.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>26 k</td>
</tr>
</tbody>
</table>

Individual Presentation: Powder 60 g bottle and Liquid 55 ml bottle
**Features**
This self-cure acrylic resin—polymer and monomer—is used for repairing dental prosthesis and the making of orthodontic and orthopedic appliances.
- The total amount of time required for repairing different acrylic structures or for making orthodontic appliances is 10 minutes approximately, with an average work time of 4 minutes.
- This resin is highly resistant to fractures and does not require heat treatment for its polymerization.
- It allows an easy cutting and polishing and recuperas its original gloss.
- A greater naturalness is achieved when the right selection of a color shade is made for each patient.
- An optimal dimensional stability can be achieved when the right liquid-to-powder ratio is used as indicated.

**Instructions for use**
**Acrylic Mixture Ratios:**
- Weight ratio: Two parts of Self-cure VERACRIL® Polymer + One part of Self-cure VERACRIL® Monomer.
- Volume ratio: Three parts of Self-cure VERACRIL® Polymer + One part of Self-cure VERACRIL® Monomer.

**Preparation of Acrylic Dough:**
- The acrylic dough is prepared in an adequate container (a dappen dish or a glass, silicon, or porcelain container).
- The polymer is poured over the monomer in the indicated ratios. The mixing is continually made crosswise during 30 seconds approximately in order to ensure the complete incorporation of polymer and monomer particles.
- Put a lid on the container for avoiding the entrance of air until the acrylic dough reaches its filamentous phase (when the mixture comes in contact with a spatula, filaments can be seen).
- Finally, proceed to make the reparation of prosthesis.

**Work Time**
This mixture allows a work time from 3 to 5 minutes approximately, at a room temperature of 23 °C ± 2 °C.

**Curing time:**
This mixture has a self-curing average time of 10 minutes approximately. These intervals can vary according to the room temperature of the site.

**Polishing**
Polishing of prosthesis will be made according to the current procedures and techniques in practice in dental laboratories.
Features
Heat-cure Acrylic Resins — polymer and monomer — are used for the making of total or partial prosthesis and provisional teeth. These resins are highly resistant to fractures. They need thermal energy to polymerize; they allow an easy cutting and polishing and recuperate their original gloss.

A maximum naturalness is achieved when the right selection of a color shade is made for each patient. An optimal dimensional stability and a dental structure free of internal and external porosities can be achieved when the right liquid-to-powder ratio is used as indicated.

Instructions for use
Acrylic Mixture Ratios:

**Weight ratio:** Two parts of Heat-cure VERACRIL® Polymer + One part of Heat-cure VERACRIL® Monomer.

**Volume ratio:** Three parts of Heat-cure VERACRIL® Polymer + One part of Heat-cure VERACRIL® Monomer.
Preparation of Acrylic Dough:
The acrylic dough is prepared in an adequate container (a dappen dish or a glass, silicon, or porcelain container).

The polymer is poured over the monomer in the indicated ratios. The mixing is continually made crosswise during 30 seconds approximately in order to ensure the complete incorporation of polymer and monomer particles. Put a lid on the container for avoiding the entrance of air until the acrylic dough reaches its plastic phase (i.e. when the mixture does not adhere to the spatula or to the walls of container).

Finally, proceed to make the packaging of the flask.

Work Time
This mixture allows a work time of 10 minutes approximately, taking into account the room temperature of the site.

Pressing
The heat-curing material is packaged in the flask, with a polyethylene sheet between the heat-curing resin and the impression model. Apply a slow pressure of 1500 psi. Take out material from the press. Open the flask to remove the polyethylene sheet and cut out the acrylic excess with a spatula. Close the flask again and apply a definite 2000 psi pressure to the flask, in order to ensure a non-altered vertical dimension.

Curing

Follow the steps described in the chart below.

<table>
<thead>
<tr>
<th>Time</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 Minutes</td>
<td>Water at 73° C</td>
</tr>
<tr>
<td>30 Minutes</td>
<td>Boiling water 100° C</td>
</tr>
<tr>
<td>30 Minutes</td>
<td>Room temperature 23° C</td>
</tr>
<tr>
<td>15 Minutes</td>
<td>Water at room temperature 23° C</td>
</tr>
</tbody>
</table>

Shades
Powder, heat and self-curing availables shades:
Original or veined pink, clear and tooth shade 59-62-65-66-69-77-81
Vita® shades type:
A2 - A3 - A3.5 - B2 - B3 - C3 - D3 - Incisal.
CHARACTERISTICS
The formulation of Self-cure NOVACRYL® -LIQUID AND POWDER- is appropriate for the making and repairing of provisional bridges and crowns that must stay for a short period of time inside the patient’s mouth.
Teeth colors are similar to natural teeth shades.
A good dimensional stability can be achieved when the right liquid-to-powder ratio is used as indicated by the manufacturer.
The natural translucent effect of enamel is achieved with the use of incisal-coloured NOVACRYL®.
This acrylic resin does not require heat treatment for its cure.

INSTRUCTIONS FOR USE

1. Direct Method

Make a complete impression of patient's mouth in silicone or alginate and carve the teeth;
Cut all the pontic areas in the impression;
If the impression was made with alginate, wash it in warm water and remove excess of water with a soft air jet;
Select the color of NOVACRYL® powder that best resembles the color of patient's teeth;
Lubricate the supporting teeth and adjacent gingival tissues with a thin covering of Vaseline for an easy removal of the provisional bridge of NOVACRYL®.
Remark: To avoid the drying of the alginate-made impression, it must be wrapped in a wet towel until the casting phase.
Mixture Ratio
The volume ratio of the mixture consists of three parts of Self-polymerizing NOVACRYL® powder + one part of Self-polymerizing NOVACRYL® liquid per volume unit.

Preparation of Acrylic Dough:
The polymer is poured over the monomer in the indicated ratios. The mixing is continually made crosswise during 30 seconds approximately in order to ensure the complete incorporation of polymer and monomer particles. Wait for 30-60 seconds.

When the acrylic dough reaches its desired consistency fluid phase, put it in the impression tray by softly filling the area of pontics and supporting teeth. Place the impression tray in the patient's mouth and apply pressure.

Curing
Before the beginning of the exothermic reaction, remove the impression tray from the patient's mouth and let the provisional NOVACRYL® bridge curee in the impression tray. The bridge must not cure in the patient's mouth. Remove the NOVACRYL® bridge from the impression tray.

Work Time
This mixture allows a work time from 5 to 6 minutes, according to the room temperature of the site.

Polishing
The anatomy and contours of the prosthesis are polished according to the current procedures and techniques in practice in dental laboratories.
Place carefully the bridge on the supporting teeth and establish an adequate occlusion.
If adjustment and occlusions are satisfactory, cement the NOVACRYL® bridge and then verify the patient's occlusion.
To obtain a better characterization of the bridge, use Incisal NOVACRYL® range in colours to simulate teeth's enamel.
2. Indirect Method:

Provisional Teeth with Self-polymerizing NOVACRYL®
Build the NOVACRYL® veneers in a clinical model in plaster;
Carve the bridge area and the supporting teeth at approximately 0.5 mm, similarly to a tooth preparation for a crown of a greater diameter. The edentulous spaces and the supporting teeth will be replaced later by acrylic veneers. Isolate with plaster-to-acrylic separator NOVAFOIL and condition the acrylic veneers in the clinical model. Select the adequate NOVACRYL® powder.

Preparation of Acrylic Dough:
Prepare a volume unit of acrylic dough in a dappen dish by mixing three parts of Self-polymerizing NOVACRYL® powder + one part of Self-polymerizing NOVACRYL® liquid. The mixing is continually made crosswise with a spatula during 30 seconds approximately in order to ensure the complete incorporation of polymer and monomer particles. Avoid air incorporation into the dough. Close the container to avoid the drying of material until the acrylic dough reaches its desired consistency fluid phase.

Pour immediately the dough into the corresponding area and be sure to completely cover the area of the supporting or abutment tooth.

Curing
To avoid retention of material and before the beginning of the exothermic reaction, remove and place again several times the acrylic structure in the plaster cast. Let the acrylic structure polymerize in the plaster cast.

Work Time
This mixture allows a work time from 5 to 6 minutes, according to the room temperature of the site.

Polishing
The anatomy and contours of the acrylic structure are polished as necessary, according to the current techniques in practice in dental laboratories.
Place carefully the NOVACRYL® veneer on the supporting or abutment tooth and establish an adequate occlusion.
If adjustment and occlusions are satisfactory, cement the NOVACRYL® veneer and verify again the patient’s occlusion.

To obtain a better characterization of the bridge, use Incisal NOVACRYL® range-in colors to simulate teeth’s enamel.

SHADES

NOVACRYL® Tooth-coloured: -59, 62, 65, 66, 67, 69, 77, 81 and incisal-
Vita® Shades Type: -A1, A3, A3.5, B2, B3, C3, D3-
Heat-Cure
Acrylic

**CHARACTERISTICS**
Heat-cure NOVACRYL® is used for the making of provisional bridges and crowns that will have a long lifetime inside the patient’s mouth. Through thermal treatment, it is possible to obtain an optimal cure of this acrylic resin; the residual monomer content is minimal. This avoids irritation and lacerations of oral tissues in patients. The right formulation of this resin ensures acrylic structures that are highly resistant to the pressure forces exerted by the chewing function. Its colors are more stable under the oral cavity conditions.

**INSTRUCTIONS FOR USE**

1. **Indirect Method**

Provisional Teeth with Heat-polymerizing NOVACRYL® The provisional bridge is built in a clinical model in plaster. Carve the pontic area and the supporting teeth at approximately +0.5 mm, similarly to a tooth preparation for a crown of a greater diameter. The edentulous spaces and the supporting teeth will be replaced later by acrylic veneers.

Submerge the clinical model in water at a room temperature during 5 minutes.

Take out the model and remove the surface water with an air jet.

Apply vaseline or a special plaster-to-wax separator inside the spaces to be restored.
Carve the teeth in wax and restore the piece’s morphology in order to obtain a passive contact with the oral tissues. The occlusion of bridge teeth is established by articulating them with the antagonistic model.

Remove carefully the wax-carved bridge from the clinical model.

Pour the first addition of plaster stone-Type III- into a flask. Use a paintbrush to cover with plaster the cavities of the supporting or abutment teeth, avoiding the incorporation of bubbles. Submerge the wax-carved bridge in fresh plaster with the vestibular part of the dental pieces remaining outside the plaster. Avoid possible retentions.

When the plaster has forged, apply plaster separator NOVAFOIL with a paintbrush. When it is dry, use a paintbrush to cover the wax teeth with plaster, taking care of making a complete covering of teeth. Complete the pouring of plaster in the counter-flask and let it forge. Submerge in water at 65ºC for one minute and then, carefully separate the flask parts in order to completely remove the wax with hot water and detergent.

Apply plaster separator NOVAFOIL on the still-hot plaster and let it dry.

Select the color of NOVACRYL® powder.

**Mixture Ratio**

The dough ratio to be used is the following:

three parts of heat-polymerizing NOVACRYL® powder + one part of heat-polymerizing NOVACRYL® liquid per volume unit.

Prepare the mixture in a container that cannot react with methyl methacrylate (a dappen dish or a glass, silicone or porcelain container).

Pour the polymer over the monomer in the indicated ratios. Mix crosswise continually during 30 seconds approximately in order to ensure the complete incorporation of polymer and monomer particles. Put the lid on the container to avoid evaporation and drying of material until the dough reaches its plastic phase - when the mixture does not adhere to the spatula or to the walls of container -. Proceed then with the packing of the flask.

**Pressing**

Pack the heat-curing material in the previously prepared flask, with a polyethylene sheet between the heat-curing resin and the impression model. Apply a slow pressure of 1500 psi. Take out material from the press. Open the flask to remove the polyethylene sheet and cut out the acrylic excess with a spatula.

Close the flask again and apply a definite 2000 psi pressure on the flask, in order to ensure a non-altered vertical dimension.
Work Time
This mixture allows a work time from 11 to 12 minutes, according to the room temperature of the site.

Curing
Follow the steps described in the chart below.

<table>
<thead>
<tr>
<th>Step</th>
<th>Temperature</th>
<th>Time</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>73º C</td>
<td>90 min</td>
<td>Water</td>
</tr>
<tr>
<td>2</td>
<td>100º C</td>
<td>30 min</td>
<td>Water</td>
</tr>
<tr>
<td>3</td>
<td>23º C</td>
<td>30 min</td>
<td>Air</td>
</tr>
<tr>
<td>4</td>
<td>23º C</td>
<td>15 min</td>
<td>Water</td>
</tr>
</tbody>
</table>

Polishing
The bridge must be cut and polished until achieving the proper adjustment and occlusion. Now, it is ready for cementing. Submerge it in water at room temperature until the moment of putting it into use.

To obtain a better characterization of the bridge, use Incisal NOVACRYL® range-in colors to simulate teeth’s enamel.

SHADES

CHARACTERISTICS

This resin is an effective alternative for the making of inlay models used in restoration of crowns. It ensures a true and exact copy and an excellent adaptation of the restoration of endodontically-treated teeth.

ADVANTAGES

This resin can be used not only in the dental laboratory but also in the dental office, directly inside the patient’s mouth.

USES

This resin can be used both in direct procedures (clinical interventions) and in indirect procedures (laboratory works).

It is mainly used in the preparation of metallic structures such as pins or radicular retainers, in provisional teeth with metallic reinforcement, in the making of tooth-shaped “caps” for fixed prostheses, and to fabricate welding keys.
DIRECT TECHNIQUE

Prepare the root canal by completely isolating the root canal walls with vaseline for an easy removal of the acrylic-made structure. An endodontic instrument with a rolled cotton ball (simulating a swab) is used for this purpose.

Have a metallic lentulo paste filler—or a guide made with this resin—ready to use it later on as intra-radicular retention and also as a support in the restoration of the tooth piece. The pin’s length must be 0.4 mm longer than the size of the crown.

Mix the acrylic powder and the acrylic liquid in a dappen dish or in another adequate container in a volume ratio of 2:1 (two parts of powder + one part of liquid).

A spatula or a paintbrush can be used for rebasing the guide that is impregnated with this resin. Then, introduce it in the root canal by doing rotating movements in order to eliminate bubbles. Before the end of the polymerization process of material, remove the rebase and re-introduce it again, avoiding any retention inside the root canal. When the material has completely polymerized, remove the acrylic structure with a pair of hemostatic forceps.

The excess of material can be removed with a bur or a point specially mounted for carvings. The acrylic structure is now ready to be sent to the laboratory for the making of the metallic pin.

This resin allows a work time between 5 to 6 minutes at a room temperature of 23ºC ± 2ºC.

INDIRECT TECHNIQUE

The indirect technique is similar in performance to the direct technique. The only difference is that in this case, the work is made on the patient’s impression which is a true copy of the intra-radicular root canal, in order to ensure the adaptation of the pin to the root canal.

Making of a tooth-shaped cap Have the plaster cast ready with the carved tooth stump isolated with vaseline. Prepare a quantity of powder and a quantity of liquid in two dappen glasses.

Moisten the spatula or the paintbrush with the liquid, impregnate it with the powder, and add the material on the cast. This operation will be repeated as many times as necessary until achieving the shape and a uniform width. Before completion of the polymerization process, remove the cap from the cast to prevent its adherence. Put it again in the cast and let it polymerize on the tooth stump.

SHADES
This resin comes in red color powder and transparent liquid.
Ez-Cryl®

Microwave-Curing Acrylic Resin

CHARACTERISTICS

Ez-Cryl® is an acrylic resin that polymerize in 10 minutes under microwave heating. This treatment ensures dentures with no porosities, high gloss, and a minimum of monomer content.

ADVANTAGES

- It's a pigmented acrylic with cadmium-free colourings;
- It improves the working time up to 90%;
- Thanks to its specific features, it can be subjected to high temperatures in a short period of time. As a result of this, a minimal contraction is produced.
- It allows a high gloss in a lesser period of time.

INSTRUCTIONS FOR USE

Microwave oven
The microwave oven to be used for polymerization purposes must have the following features:
Power: 800 - 1300 watts;
10 power levels minimum;
Minute timer chronometer;
Rotating and removable glass dish.

Characteristics of the Flask

The acrylic resin for microwave polymerization must be processed in a flask with the following characteristics:
The flask must not be metallic;
It must be resin-made, of resistant ceramics specially designed for microwave treatment;
It must be a high-impact flask;
It must have a precise closing and a mechanic adjustment in all its ends. This way, it can resist the indicated pressure for a proper packing.
**Flasking Technique**
Use the conventional teeth-filing technique and conventional waxing. Isolate with Vaseline all the inner surface of the flask to prevent adherence of plaster to the flask. Pour common plaster (Type II) on the low surface of the flask. Position the impression, avoiding the formation of retentions. Place the occlusal surfaces of teeth in parallel to the base of the flask to avoid dislocation of teeth during the pressing stage. When the plaster has forged, isolate its surface with plaster-to-plaster and plaster-to-acrylic separator (Novafoil plaster separator is recommended). Complete the filling of the flask with plaster stone (Type III) by covering completely the prosthesis.

**Wax Removal**
Wait for 30 minutes until completion of the second phase of the forging of plaster. Use the traditional wax release method or the microwave heating method to remove the wax. To remove the wax using the microwave heating method, put a water-moistened cotton on the wax excess, adjust the flask, and place it in the microwave oven. The microwave oven must be programmed for two minutes at its highest power. Take the flask out from the microwave oven, remove the cotton, and verify the absence of any wax layer on the plaster surface. If it is still necessary, use hot water and detergent.

**Application of plaster separator**
In the hot flask, apply a fine coating of Novafoil separator on the plaster. Let it dry.

**Preparation of Acrylic Dough**
Use three parts of polymer + one part of monomer, per volume unit. Prepare the acrylic dough in a glass or porcelain container. Pour the polymer over the monomer in the indicated ratios and mix the parts with a spatula until a complete incorporation of polymer and monomer particles is achieved and there is homogeneity in the acrylic dough. Incorporation of bubbles during the mixing with the spatula must be always avoided. Put a lid on the container until the dough reaches its filamentous phase and is ready to be packed.

**Packing**
Put the acrylic dough in its filamentous phase in a flask. Cover with a polyethylene sheet and close the flask.
Begin the first low pressing until reaching a 1500 psi pressure.

Open the flask and remove the polyethylene sheet. Remove excess of acrylics with a spatula. Close the flask again and apply a definite 2000 psi pressure. Put the screws.

**Microwave Curing**

Put the flask on the oven’s rotating dish with its screws downside and make the cure process by strictly following the instructions of the “Microwave-Power-Programming Chart” appearing below.

**Proceed as follows:**

**First Phase:** Let polymerize during three minutes at the power indicated in the “Microwave-Power-Programming Chart”.

**Second Phase:** Wait for four minutes with the microwave oven in “off” position.

**Third Phase:** Restart polymerization during three minutes at the power indicated in the “Microwave-Power-Programming Chart” appearing below.

Take the flask out from the microwave oven and let the flask stand at room temperature during 30 minutes.

Put the flask in cold water during 15 minutes.

**Deflask.**

**Microwave-Power-Programming Chart**

<table>
<thead>
<tr>
<th>Power of Microwave Oven in watts</th>
<th>First Phase: (3 min) Power %</th>
<th>Second Phase: (4 Min) Power %</th>
<th>Third Phase: (3 Min) Power %</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 - 900</td>
<td>40%</td>
<td>0%</td>
<td>90%</td>
</tr>
<tr>
<td>1000 - 1100</td>
<td>40%</td>
<td>0%</td>
<td>80%</td>
</tr>
<tr>
<td>1200 - 1300</td>
<td>30%</td>
<td>0%</td>
<td>80%</td>
</tr>
</tbody>
</table>

**REMARK 2:** You can place even two flasks for total prostheses inside the oven. In this case, the time must be increased in one additional minute in the third polymerization phase.

**Polishing**

The polishing is made according to the current techniques in practice in dental laboratories.
WARNINGS

The use of solvents applied on the acrylic structure is not recommended since it can cause micro-fractures or material cracking.

The contact with water when manipulating the acrylic dough produces incorporation of bubbles in the acrylic dough that prevent the compaction of material and produce off-white veins in the curing structure.

Always keep your hands and work instruments dry to prevent incorporation of bubbles in the acrylic structure.

PRECAUTIONARY MEASURES

Acrylic resins are products for external use only. Due to the nature of these products, it is advisable to work in very well ventilated areas, preferably with vapor extractors, safety glasses, latex gloves, and apron.

These products are highly volatile and can produce irritation of mucous membranes and possible skin irritation. This is why all kinds of safety measures must be taken.

RECOMMENDATIONS

Avoid permanent contact with skin or eyes and inhalation of vapors.

After direct skin contact, wash the skin with plenty of water and a soft soap.

After inhalation, take out the patient from the exposure area and move him/her to a ventilated place. If necessary, supply the patient with oxygen or give artificial breathing.

In case of direct contact with eyes, wash the eyes with plenty of water during 15 minutes. If harmful effects persist, see the doctor immediately.

If swallowed, induce vomiting and see the doctor immediately.

STORAGE

Acrylic monomers and polymers must be stored in cool, dry, and well ventilated areas, protected from direct light, heat or ignition sources.

PRECAUTIONS CONCERNING MANIPULATION AND TRANSPORTATION

Tolerance of these acrylic resins is 410 mg per m³ of air, for 8 hour-work exposures, according to OSHA.

These acrylics can be transported in glass, metallic or plastic containers. If product is spilled, it can be incinerated or properly disposed according to local regulations into effect.

The main fire fighting measures are the following:
- Extinguish any open flame and ignition source.
- Use fire extinguishers for primary fire sources —ABC Type—
- Personnel in charge of fire extinguishing must wear protective equipment, autonomous breathing equipment, a whole-protection face mask, in positive pressure.

FREQUENTLY ASKED QUESTIONS

People are currently asking for coloured acrylic Biodent Vita, Duratone, and Biodent.

Answer:// The three most used VITA colors will be in the market very soon.

Why acrylic liquids in small commercial presentations do not come in plastic containers?

Answer://Up to now, it has not been possible to get plastic containers that can preserve the acrylic product as well as it is done by glass containers.

Why do acrylic liquids polymerize even if handling precautions are taken?

Answer://Not only handling measures must be taken into account. The transport and storage conditions of acrylic products are equally important, because self-polymerization of liquids may begin in presence of high temperatures or direct exposure to sunlight. Moreover, when using an acrylic liquid, it can be contaminated by a polymer and the polymerization process begins if enough cleanliness precautions are not taken.

Why is industrial acrylic apparently thicker?

Answer://Industrial acrylic is thicker because its granulometry is different from acrylics used for denture bases and dental repairs. In this later case, its use is not so demanding concerning this specific feature, and that’s why its price is much more lower.

The delivery period is too long!

Answer://We are taking the necessary measures to improve delivery periods.
The quality of New Stetic’s acrylic resins is very good, but the colorimeter does not coincide with the color offered in the bottle label!
Answer://The colorimeter is only a promotional material used to reflect the shades of New Stetic’s acrylics. The similarity in shade depends on the thickness with which the supplied guide is compared.

People compare New Stetic’s acrylics with American acrylics and say that particles of the American products are not so fine, excepted the microwave-curing acrylics!
Answer://The granulometry of New Stetic’s acrylics does not affect the physical and mechanical features required by acrylics for denture bases, according to the ISO Standard 1567.

New Stetic’s transparent acrylic becomes milky and with bubbles!
Answer://The milky appearance and the presence of bubbles depend on the way you prepare the acrylic dough (for instance, a bad mixing with the spatula) in any of the following cases: low pressure in the molding process, manipulation of dough by wet hands or the use of wet containers.

New Stetic’s acrylic does not come with instructions for handling, instructions for preparing the acrylic dough, the work time, and the polymerization process!
Answer://You and your customers will have access very soon to this information through our Web Site www.newstetic.com

Tooth-coloured acrylics offered by New Stetic do not coincide with the corresponding tooth color!
Answer://New Stetitic is presently offering a wide variety of tooth-coloured acrylics from which you can select the one that adapts the best to your dental needs. Based on our customers’ worries, the Research & Development Department of New Stetitic is permanently analyzing the possibility of making improvements to our products provided that a market demand that can justify such improvement really exists.
DEFINITION OF THIS PRODUCT
The plaster separator is a plaster-to-plaster or plaster-to-acrylic un-molding material that is used in the flask processing technique to avoid direct contact of resin with dental plaster without altering denture dimensions.

CHARACTERISTICS
The right formulation of the plaster separator ensures a complete covering of the tiny porosities of plaster. This will produce an acrylic structure with a smooth surface and high gloss.
The plaster separator keeps the plaster cast with its characteristics intact.

USES
In the flask processing technique, when the plaster is free of wax adherences, apply a thin film of plaster separator with a soft-bristled paintbrush.
The thin film of plaster separator must be uniform without thicker areas. It must cover the whole plaster surface.
Let the film to be dried. If you want to obtain a better gloss, apply a second layer of plaster separator as thin and uniform as the first one.

RECOMMENDATIONS
Apply thin and uniform coatings. The demoulding agent cannot be in contact with the surfaces of acrylic resin teeth because this can prevent the chemical bonding between the tooth and the denture base.
Do not add water to Novafoil. Otherwise, you can alter the chemical properties of this product.

COMMERCIAL PRESENTATIONS
Bottles: 60 ml, 120 ml, 420 ml
Gallon: 3,785 ml

GENERAL PRODUCT INFORMATION
In dental laboratory works, the plaster separator is used as an insulating material to avoid the sticking of plaster surfaces to other materials or to any other plaster surface. To achieve the purposed goal, only a fine film of this substance will be necessary to produce an effective insulation.
O-Cryl®
Self-cure acrylic resin for orthodontic and orthopedic appliances.

CHARACTERISTICS
Self-cure O-cryl®-liquid and powder- is appropriate for the making of orthodontic and orthopedic appliances. The total amount of time required for making orthodontic appliances is 10 minutes approximately, with an average work time of 4 minutes. This acrylic resin is highly resistant to fractures and does not require heat treatment for its curing. It allows an easy cutting and polishing and recuperates its original gloss. A greater naturalness is achieved with the right selection of the color shade. An adequate dimensional stability can be achieved when the right liquid-to-powder ratio is used as indicated.

INSTRUCTIONS FOR USE
The self-polymerizing acrylic liquid must be used in its reconstitution with the self-polymerizing acrylic powder for the making of acrylic supports in orthodontic removable appliances.

Mixture Ratio
The volume ratio to be used in the acrylic mixture is as follows:
Volume ratio: Two parts of Self-polymerizing Polymer O-Cryl® powder + one part of Self-polymerizing Monomer O-Cryl® liquid.
**Preparation of Acrylic Dough**

Prepare the acrylic dough in an adequate container (a dappen dish or a glass, silicone, or porcelain container). Pour the polymer over the monomer in the indicated ratios and mix the parts with a spatula until a complete incorporation of polymer and monomer particles is achieved and there is homogeneity in the acrylic dough. Incorporation of bubbles during the mixing with the spatula must be always avoided.

Put a lid on the container to avoid air incorporation.

Proceed then to pour the mixture (in its fluid phase) on the cast, until achieving a total covering of all retentions of functional wires.

Finally, mold the mixture in the cast’s palate zone by moistening the cast with the self-polymerizing liquid. Cut the necessary excess of material to mold the necks and the border of the acrylic support on the palate.

While the exothermic reaction takes place, try as possible to cover the acrylic cast with a container, for example, the cup you used to mix the plaster.

**Work Time**

The mixture allows a work time of 3 - 5 minutes, at a room temperature of 23°C + - 2°C

**Curing Time:** (Average Time): 10 minutes.

These intervals may vary according to the room temperature of the site.

**Polishing**

The polishing is made according to the current procedures and techniques in practice in dental laboratories.

**Shades**

O-cryl Liquid for removable orthodontic appliances is available in the following colors: Yellow, Blue, Red.

O-cryl Powder for removable orthodontic appliances is available in the following colors: Pink, Yellow, Lemon, Fuchsia, Transparent.

**Commercial presentations**

- Individual 60g plastic bottle (powder)
- Individual 55 ml glass bottle (liquid)
- Coming soon:
  - Plastic bottles (powder): 60 g, 125 g, 250 g, 1000 g
  - Glass bottles (liquid): 55 ml, 110 ml, 250 ml, 1000 ml and gallon