



# Impak, the acrylic resin with memory

Create quality dental appliances and dentures  
using thermoflexible resin



# ADVANTAGES

## Dental appliances

- Precision adjustment
- Offers excellent protection for natural teeth.
- Prevents dental attrition in cases of bruxism

## Partial dentures

- ▶ Can be combined with regular acrylic
- ▶ Easily inserted in the mouth
- ▶ Powder/liquid ratio variable to get the desired flexibility
- ▶ Does not require any special equipment
- ▶ Undeniable esthetic function.



Unique characteristics of Impak allow a variety of uses and make it more comfortable for the patient to wear a dental appliance or a denture.



# Steps for fabricating an anti-grinding night guard with flexible retainers





# What you need to have

1. The upper and lower plaster casts
2. Bite registration centered at the desired opening for the devices and ideally, lateral bite registration.



# Cast Preparation and Waxing





## Cast Preparation and Waxing

- On the stone cast, block the retentions, such as bridges or non-parallel teeth.
- Duplicate the cast to create the master cast which will be use to work.
- Take bite registration measurements on a precision articulator for articulation placement.





## Cast Preparation and Waxing

- Cover the coronal portions of the teeth with two coats of baseplate wax. If the teeth do not present any undercuts, spread the wax to the vestibules. Seal the edges of the cast with wax.
- Use a lubricant to stop the antagonistic teeth from sticking to the wax.
- Add enough softened wax to fill all the interocclusal spaces once the articulator is in place and closed.







## Cast Preparation and Waxing

- Close the articulator and verify the protrusive and balancing movements.
- Once this step is completed, do the final waxing.
- Remove the casts from the applicator and apply petroleum jelly to the base of the cast to facilitate deflasking.



# Flasking



# Flasking

- Fill half of the chosen flask with laboratory plaster.
- Add the waxed master cast to the flask and cover with the plaster up to 1/8" (3 mm) from the occlusal surfaces and the incisal edges.





# Flasking

- Eliminate all the remaining undercuts, smooth the surface and let the plaster harden.
- Apply a separator to the plaster surface.
- Complete the flasking with a plaster and stone mixture.





# Boil-out





## Boil-out

- Place the flask in boiling water for 3 to 5 minutes, just long enough to soften the wax.
- Open the flask and remove as much wax as possible.
- Place the upper and lower flasks in the boiling water to which you have added a wax solvent and finish removing the wax completely.

\* Important: ensure that you rinse the teeth completely with clean boiling water.





## Boil-out

- Place the flasks on their side to let the water drip off for 10 seconds.
- Apply Separaplus separator on both parts of the flask
- Set the flasks back on their sides to let them dry and cool.





# Boil-out

- Add a sheet of separating paper on the surface of your master cast
- Create a spacer using wax or putty. Use a wax strip  $\frac{1}{2}$ " thick and press it into your separating paper on the surface of the master cast. You will be able to fill it with acrylic in a subsequent step.
- Remove the excess wax and press the flasks together.





## Boil-out

- Open the flask and check the cuspid cut.
- Remove part of the wax to create a 0.2 to 0.3 mm space between the cuspids and the acrylic. This step lets you create a slight cushion for the margin of error.



# Packing and Curing





## Packing and Curing

- To obtain the ideal mixture, use a 2:1 ratio of powder to Impak liquid.

### ***Attention!***

This material offers 30 to 60 seconds of fluidity.

The flask must be created and packed within this time limit.

Take note that adding liquid will make the appliance more malleable. If less liquid is added, the device will be more rigid.

Don't forget that an Impak appliance will always seem more rigid at room temperature than in the patient's mouth.



## Packing and Curing

- Take care to mix the powder and the liquid well according to the recommended ratio or the desired malleability.
- Mix the polymer as long as it is wet. This will eliminate the formation of bubbles.
- Immediately pour the polymer gently into the flask. Pour from side to side until the flask is filled.

*Don't forget! You will have only 30 to 60 seconds of fluidity.*





## Packing and Curing

- While the material hardens, fill the flask approximately 10% more. It is normal for the polymer to overflow.
- Cover and let the overflow harden in the bowl. Make sure to cover the bowl well to prevent the monomer from evaporating.



## Packing and Curing

- Wait until the Impak material has hardened enough to pack it. In the meantime, mix bright or pink methyl-methacrylate during regular curing, according to the ratio recommended by the manufacturer. Cover with a sheet of cellophane and let it rest.
- Let the Impak material rest in the bowl until it is almost at the “snap” stage.
- Place the upper flask on the lower flask.





## Packing and Curing

- Put the flask under pressure. Raise the pressure slowly to 500 psi.
- Continue raising the pressure slowly until 2500 psi is reached within 2 minutes.
- Once the Impak material is ready for final closing, open the flask while leaving the sheet of cellophane in place.



## Packing and Curing

- Remove the spacer from the mould.
- Pack the occlusal side of the flask with the acrylic, as much as necessary.

***Note:*** During this packing procedure, make sure to have at least 2 sheets of cellophane between the Impak material and the acrylic.





# Deflasking and Remounting



# Deflasking and Remounting

- Proceed with deflasking.
- Remove all the plaster around the appliance, without removing the appliance itself from the plaster cast.
- Rough out the occlusal indices as much as necessary.





# Deflasking and Remounting

- Place the flask in hot water to soften the Impak material and remove it from the plaster mould without risk.
- Remove the appliance from the plaster mould carefully. One way to do this is to demould one corner of the Impak appliance delicately and let water run between the appliance and the plaster mould until the appliance is completely detached from the plaster.
- *Attention!* The Impak material tends to tear during this procedure. Make sure to handle delicately.
- Once the Impak appliance is removed from the plaster, you may begin the finishing process.





# Finishing and Polishing

# Finishing

- Do not overheat the appliance during the finishing and polishing steps. To achieve this, you can dip the appliance in cold water when you consider that it is getting too warm.
- Complete the finishing of the appliance with the acrylic burs.
- Polish the appliance with a polishing wheel and pumice stone. Add a finishing agent to help give the appliance a glossy finish.



*Note: You will notice that the appliance will have a cloudy or stained appearance. This effect should disappear within 1 to 3 days, depending on the thickness of the material. You will obtain an appliance with a glossy finish.*





It is now time to go to the lab  
and create your own dental  
appliance with Impak  
thermoflexible acrylic!