

## Valplast Repair & Reline Guide

### Replacing a Broken Tooth with an Acrylic Denture Tooth

*These procedures can be done in the Dental office*

#### Step 1

To replace an acrylic tooth that dislodges from the Valplast denture base, first create a post that will provide mechanical retention for the replacement tooth.

A retention post can be fabricated from the retention pin of a porcelain tooth, threaded retention wire (such as Perma-Ret from Preat Corporation) or a wire ball clasp.

If using the retention pin from a porcelain tooth, break up the tooth using pliers and reclaim the retention pin from its center.

If using a wire ball clasp, bend a small loop with bird beak pliers approximately 2mm from the ball end of the wire.

Cut the wire at the end of the loop so that all that remains is essentially a small barbell, with the ball clasp at one end and the retention loop at the other.

With tweezers, hold the pin or ball clasp over a burner flame until it becomes red-hot.

Insert it quickly into the Valplast® socket where the tooth broke out from, and let the post penetrate the Valplast® about half way (note: if using a ball clasp, the ball end should be embedded into the Valplast with the retention loop sticking out).

Use two pins whenever space permits, as this will provide additional retention for the replacement tooth.

If you are using threaded retention wire as your post, first drill a pilot hole approximately 2mm into the socket where the tooth came out from.

Using a pin vise, thread a small section of retention wire into the pilot hole.

Cut the wire so that approximately 2mm

are left sticking out of the denture base. This wire can be trimmed or bent to accommodate space for the tooth as needed.

If the original tooth is still usable, grind it to fit over the pins and proceed as above, curing it in position with self-curing acrylic (tooth shade or pink).

If the tooth is not usable or lost, grind in a new acrylic tooth and cure it into position as described above.

#### Step 2

If a porcelain tooth breaks out of a Valplast® case, leave the pin in the Valplast® and grind in a stock acrylic tooth.

Secure the tooth over the head of the pin with self-cure acrylic.

The acrylic will bond chemically with the tooth and mechanically with the protruding pin.

### Replacing a Broken Tooth with a Porcelain Denture Tooth

*These procedures are usually done in a laboratory*

To replace a porcelain anterior tooth with another porcelain anterior tooth, remove the pins of the broken tooth with heated tweezers then proceed with either of the following two methods:

#### The Hot-Air Welding Method:

*This method requires a welder +welding rod and no Val-Fuse™*

*(Requires the use of the Valplast Hot-Air Welder which comes included in the Valplast Injection System or sold separately)*

Under this method, grind in the teeth, take a plaster matrix, and, with hot water, wash out the wax with which the ground-in teeth are secured to the Valplast®

Place the model with the partial, the matrix,

and the ground-in tooth in a clamp. With the

Valplast® Welding Rod in one hand, take the welding gun in the other hand and apply hot air to the lingual surface of the porcelain tooth.

Apply the rod to the junction point until the cavity has been filled with melted resin.

When there is sufficient resin in the cavity, begin immediately to press the melted surface either with your thumb (covered in tinfoil), or a clean spatula.

Repeat these steps as often as necessary to achieve the desired surface level.

Note: Although porcelain denture teeth are seldom used these days (particularly with partial dentures), acrylic denture teeth will not work with this welding method due to the absence of retention pins. Porcelain denture teeth should be used if this repair method is to be attempted.

### The Injected Repair Method

*This method requires Valplast® processing equipment +Val-Fuse™*

This method is described in our guide to Repairing and Rebasing Valplast Dentures under how to add teeth to an existing partial.

The injected repair method will provide a secure and more permanent bond to the existing Valplast® denture base and is recommended when adding a single tooth, multiple teeth, or clasps to a Valplast® denture.

Please refer to the technical bulletin or our technique manual for details.