

# Techniques for Successful Flexible Partial

## What is DuraFlex® & TCS® Unbreakable?

**DuraFlex** and **TCS** Unbreakable are flexible thermoplastic resins and are practically unbreakable. Both DuraFlex and TCS Unbreakable are available in four different natural tissue colored shades.



## When should DuraFlex & TCS Unbreakable be used?

**DuraFlex** and **TCS** can be used to create flexible removable partials, unilateral partials, temporary appliances for healing implant patients, and saddle/clasp areas for cast metal partials. DuraFlex and TCS are great replacements for patients that are not interested in having metal appliances. They have a more comfortable fit and will be lighter in the mouth, easier to eat with and have a “snap fit” giving confidence throughout the day. The retention will remain the same throughout the life of the partial. Patients who have compared conventional cast frame partials to our thermoplastic partials report that they feel more natural in the mouth.

## Case Planning for Flexible Partial

Unlike Acrylic Dentures, there is no chemical bond between acrylic teeth and flexible partial material. The denture teeth must be surrounded by flexible partial material, thus teeth cannot be ridge lapped or abutted to the ridge. The teeth are drilled to create mechanical retention. It is necessary to have 5mm vertical space to achieve the proper mechanical retention of the denture teeth; any less and the teeth will fail. The flexible material is nearly unbreakable, but the teeth **WILL** fail from over reduction and lack of clearance.

### Case limitations include:

- Collapsed bites are contra-indicated.
- Deep bites where upper anteriors cover lower anteriors will fail without use of metal backing/facing.
- Metal backing supports the teeth and protects them from occlusal forces.
- 5mm of vertical clearance is required unless using metal backing/facing, especially on isolated anterior teeth.

**Flexible partial denture bases typically flex towards the center of the mouth. This can create undue stress on abutments. To eliminate follow these guidelines:**

- Lower arches with few abutments (ie: 22, 27) and/or extremely resorbed ridges should incorporate a metal substructure to keep the partial more rigid.
- Tall isolated teeth and teeth with large degrees of undercut to the buccal should be avoided as abutments when possible.

**Flexible partials are tissue born and free movement stresses the abutments.**

### Impression Technique

One of the many benefits of thermoplastic partials is that little to no tooth preparation is needed. We require only a master and an opposing model. A custom tray is normally not necessary. For a precise fit and minimal adjustments we highly recommend an alginate impression be used. Alginate impression materials will record the tissue at rest instead of under load and result in a better fitting flexible partial. Please also send an opposing model and bite registration.

### Insertion & Adjustment Techniques

Prior to the initial insertion, soak the partial in hot water (not boiling) for one minute to soften the material and ease the insertion process. The Hot Water Treatment is very important as it allows for a smooth initial insertion and a good adaptation with your patient's natural tissues. When the partial cools to a tolerable temperature, gently insert it into the patient's mouth.



Flexible Partial Adjustment Kit

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If the patient senses discomfort due to tightness of the clasp, the clasp may be loosened slightly by submerging in hot water for approximately 30 seconds, removing it and gently bending the clasp outward while holding it underneath running cold tap water.

Following the same procedure but bending the clasp inward can also tighten the clasp. If there is a need for adjustment when trying the partial in the patient's mouth, the thermoplastic must be handled differently than an acrylic material. It is best not to use traditional carbide burs when adjusting flexible partials. We recommend fine stone and rubber points for most adjustments and a coral stone for areas that require more material to be removed. Set your hand piece on a low speed and use fast, light scraping back and forth movements to reduce area. Do not keep bur in one spot, be sure to keep it in constant motion. Do not use too much pressure as this may burn or distort the restoration. If there are any threads remaining, these can be removed with a sharp blade.

Call **1-800-354-2075** to order our recommended adjustment kit.

## Preparation for Adding a Tooth

A pick-up impression technique must be used. It is essential to remove all pastes or adhesives from the tissue-surface of the partial before taking the impression. With the partial in place in the mouth, take an alginate impression. Remove the impression from the mouth with the partial in the impression. Be sure the partial is fully seated in the impression material. Pour the model promptly, DO NOT separate the partial from the stone model. Ship the materials to Oral Arts with instructions to add the missing tooth or teeth and retention (if necessary).

## Preparation for a Rebase

In most cases where an overall rebase is needed, the case is jumped into a new base. A rubber base impression is taken under the partial in a closed-mouth condition. The patient closes his/her mouth gently to ensure a correct occlusion as the rubber base is setting. Once the rubber base material has set, an alginate impression is taken and the impression is removed from the mouth with the partial and the rubber base in place. Carefully examine the partial to assure that it is positioned correctly in the alginate material. Immediately pour the model with regular yellow stone. DO NOT separate the partial from the stone model. Forward to Oral Arts with instructions. It is also recommended that a new fully edentulous alginate impression be taken of the arch we are working on to facilitate the rebase.

## It is Easy for the Patient to Take Care of the Appliance

We recommend that the patient soaks and rinses their partial daily to keep it clean. It is important to remember that abrasive toothpaste can be harmful to your partial. (Most toothpastes will indicate whether or not they are abrasive.) We recommend non-abrasive TCS® Concentrated Denture Cleaner to clean your patient's partial.



## Indications for DuraFlex® & TCS® Unbreakable

- TCS material is less flexible than DuraFlex and is therefore better suited to clasp-less types of flippers that only utilize lingual undercuts.
- TCS is better suited to patients with large edentulous spaces due to its increased opacity compared to DuraFlex. In large edentulous areas where the material is very thick translucency can cause shadowing.
- DuraFlex is more translucent than TCS and therefore better suited to patients concerned about clasp visibility.
- DuraFlex is better suited to teeth with severe buccal inclinations due to the material's flexibility.

