

# Are all soft lining denture materials created equal?

by Nancy Tomkins DT(dip), DD, FCAD, Denturist

**K**eeping patients comfortable with 'conventional' dentures that rest on less-than-ideal ridges is becoming increasingly more difficult.

Severe atrophic ridges and thin mucous membrane areas are a daily challenge for denturists because patients expect comfort from their dentures, despite their compromised oral condition. Although dental implants are the optimum treatment option, many patients choose not to have implants placed for a number of reasons. In such cases, an alternative must be found to assist the patient. Although soft lining material is in

no way a substitute for dental implants, it is an attempt to keep the patient as comfortable as possible.

Soft liners have had a long-standing role in the dental profession in varying applications. I have used a variety of soft liners over the decades and have had challenges and limitations in their use. I gave up in frustration, shying away from using them as a temporary or long-term laboratory technique because ultimately they posed problems, despite the promises made by the manufacturers.

In 2003, a colleague gave me a package of a soft lining material to try. I was very skeptical. In fact, the material sat on

my shelf for nearly eight months before I used it. One day in desperation, I used the material on a full lower denture in a laboratory technique. I was impressed by the bonding strength to the denture base and how easy it was to use. I started using the material on selected patients over the next few weeks to ensure the material was as effective and lived up to the manufacturer's promises.

The patients were recalled every few months for two years to ensure that the soft lining material did not harden, debond or crack as many other materials have done. I evaluated the material and the comfort of the patient. I was so im-



Fig.1 Problems of plasticizer soft liners – material will harden, crack, and cause oral hygiene concerns and irritated tissue.

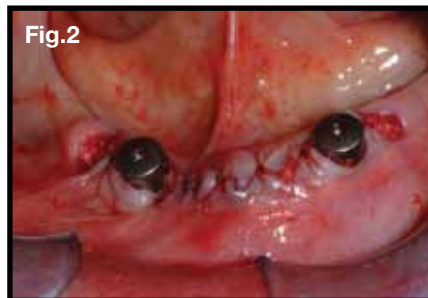


Fig.2 Used as temporary liner immediately following dental implant placement.

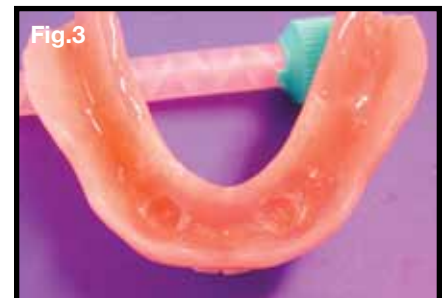


Fig.3 EasySoft liner™ used during the healing stage on dental implants.

pressed by the material that I decided to use this product on all my patients who required a soft liner.

The manufacturer recommends it as a chair-side material as well, so I began using it on immediate cases as a temporary liner – both for extractions and implant placement.

Although this article is primarily about the possibilities of EasySoft liner™, it may also be beneficial as general information about other soft lining materials. Categorizing the materials helps clinicians to understand how the soft lining material will perform for the task it is chosen for. This alone can save valuable chair time and decrease frustration for both the dentist and patient.

The categories are: 1. chemical com-

position, 2. chair-side versus laboratory use, 3. temporary versus permanent (long-term use).

There are basically three different chemical compositions in soft lining materials used today. The first chemical composition: plasticizers are a liquid and powder formulation. Some of these plasticizers can be used both in chair-side and laboratory procedures.

For chair-side procedures these soft liners are often chosen to secure immediate dentures during the healing process or in an implant overdenture prosthesis during osseointegration. These materials are used widely throughout the dental industry as a 'quick-fit-fix' in a chair-side procedure. Plasticisers are also used as tissue conditioners in

preparation of the oral mucosa prior to taking final impressions.

A disadvantage to these materials is that the liquid (ethyl alcohol) leaches out of the lining into the patient's mouth and is then replaced by saliva and bacteria. This causes the soft lining to become brittle and rough, leading to sore spots and tissue irritation. (See Fig.1 on previous page.)

Chair-side plasticisers quickly lose their soft properties and ideally should be changed every two to three days. Most of these plasticisers do not require an adhesive, therefore a strong chemical bond to the acrylic base is not achieved and the liner often peels away within a short period of time.

Some of these soft lining materials

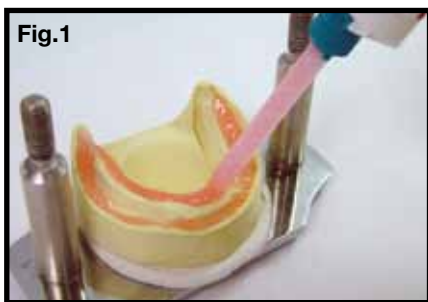


Fig.1 EasySoft liner™ can be used in a reline jig.



Fig.2 EasySoft liner™ can be used in a flask technique of any kind.



Fig.3 Stafne's bone cavities on mandibular lingual are engaged in EasySoft for retention.



Fig.4 Undercuts are utilized for retention, supported lingually by acrylic and remain comfortable and won't de-bond.



Fig.5 Two slightly mobile teeth, use of conventional clasps is not indicated; EasySoft gaskets are used instead.



Fig.6 Gaskets on 44 & 45 engage well and provide stability.



Fig.7 Bone defect after sinus surgery.

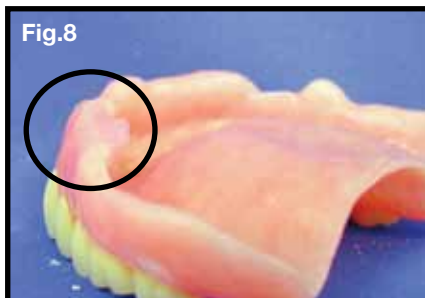


Fig.8 EasySoft used to seal sinus opening.



Fig.9 EasySoft flange on denture now seals the bone defect, preventing food from entering sinus cavity.

**The EasySoft liner™ is an easy, functional and long-term soft lining solution.**

use debutyhlphatale as a plasticiser. Debutyhlphatale is also used in many non-dental products as a softener (plasticiser). These non-dental products include some nail polishes and hair sprays. Debutyhlphatale is a known carcinogen.

The second chemical composition: HTV (Heat Treated Vulcanite) Molloplast®B is the best known HTV.

This one paste formula requires high heat to cure and adhere to the acrylic denture base. Due to the high heat needed, it can only be used in a laboratory procedure. Some denturists/technicians find some challenges with this kind of material, as the bonding to the denture base material can be technique sensitive. An adhesive is recommended with this material and when used with success is effective. Other users prefer to use new denture base material to form a chemical bond. Sometimes during the trimming and pumicing stage, if too much heat is generated, the material may peel away from the denture base.

The third chemical composition: the new generation of soft liners, such as **EasySoft liner™**, are silicones (A-silicone), also known as VinyPolySiloxane or VPS. These new materials are dispensed in a cartridge system similar

to silicone final impression materials. Due to the versatility of some of these silicones, they can often be used in both chair-side and laboratory procedures. Because of these qualities, silicones are fast replacing the previously used materials that have dominated the industry for decades. They are often referred to as the 'second generation of soft liners'.

Once you have determined what chemical composition you would like to use, you may classify the material further into two other categories: chair-side procedure versus laboratory technique.

Chair-side is also referred to as direct procedure, as you are working directly on the patient to perform this procedure. The proper handling of material and desired thickness is often compromised working directly on the patient because bonding is sometimes affected due to saliva. Some clinicians have had good success with chair-side soft liners, while others find it challenging. For temporary soft lining it is obvious that chair-side use is the procedure to use, recaring the patient at a later date to permanently reline or rebase the denture.

The laboratory technique is certainly the recommended way to do permanent (long-term) soft liners. The

laboratory setting allows the dentist/technician to handle the material in an optimum manner to control thickness of both base material and soft liner and to increase bonding strength between the two materials. Some adhesives or bonding agents adhere better and longer if a higher temperature other than patient's body temperature is utilized.

The final classification to further determine your material choice is temporary versus permanent soft liner. Although there is no question what the word *temporary* means, the word *permanent* has a misunderstood meaning in the industry. Permanent does not mean the material will be permanently attached to the denture base material nor will the material last forever. Manufacturers use the word permanent to describe the material remaining permanently soft. Perhaps we should consider using long-term soft lining instead of permanent when determining the length of time the soft liner is desired.

*For details of mentioned products, see manufacturers' instructions and MSDS for ingredients. Molloplast®B is a registered name of Detax. EasySoft liner™ is a registered trademark of Karlin Dental Inc. (Canada)*

## The EasySoft liner™ clinical application



Fig.1 A few days after extractions.



Fig.2 Immediate denture: apply bonding agent.



Fig.3 Dispense EasySoft liner™ using the gun and mixing tip.



Fig.4 Insert denture; intra-oral setting time is five minutes.



Fig.5 Denture with soft liner directly after impression taking.



Fig.6 Trim EasySoft with sharp scissors/scalpel.



## The EasySoft liner™ technical application

# EasySoft liner™ A new generation of soft lining material

Used in a variety of denture applications for edentulous and partially dentate arches, this amazing material can be used to cushion areas with thin mucous membrane, such as mandibular nerve area, Stafne's bone cavities, maxillary/mandibular tori, relief of sharp ridges and severe atrophic ridges, gaskets around dentition instead of clasps and extension of flanges in areas with severe boney undercuts.

EasySoft requires little acrylic support when used for Stafne's bone cavities or long extensions of flanges into boney undercut.

You do not need to learn new techniques to use EasySoft liner™. You can use it in a reline jig or flask during laboratory procedures.

EasySoft is very versatile and easy to use chair-side as well. The handling properties are good with lots of working time. One of the biggest advantages to using EasySoft in a laboratory technique is the 35 minute setting time, allowing you to now offer same-day soft liners. Although the material sets in five minutes, the extended 30 minutes in hot water is to increase the bonding strength of the patented bonding agent.

EasySoft does not contain ethyl alcohol or debutylphatale.

EasySoft will remain permanently soft and will not crack after years of wear.

Due to the closed surface structure of EasySoft, the build-up of candidas albicans on the tissue bearing surface is very rare. This problem has plagued the soft lining industry, until now.

Yes, it's really that good!™

[www.easysoftliner.com](http://www.easysoftliner.com)



Fig.1 Pour and place denture in reline jig as usual for acrylic reline.

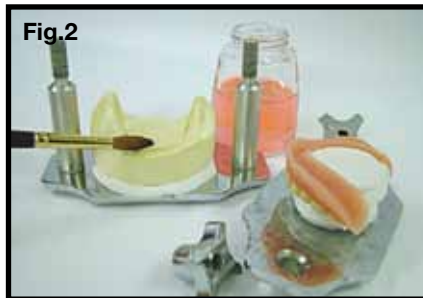


Fig.2 Separate stone using a separating fluid.



Fig.3 Prepare denture base for desired thickness of EasySoft.



Fig.4 Apply bonding agent.



Fig.5 Dispense EasySoft material.



Fig.6 Close jig as usual.



Fig.7 Immerse jig into water at 50° C for 30 min., to increase bonding strength.



Fig.8 Remove denture from jig and trim with EasySoft bur.



Fig.9 Apply sealant to the trimmed areas only.

