

RMbond® Thermoform Sheets

Application Instructions for Standard Vacuum Forming Machines Using Square Sheets

Overview

- Perfect for constructing temporary invisible retainers
- Bondable to acrylic, making it useful for creating modified appliances
- Superior conformity to the model when heated
- Great clarity when formed, creating a true invisible retainer for patients
- Material forms thin, making it comfortable for the patient, and increasing patient compliance
- Specific uses include temporary retainers, temporary bridges, and bite planes

Contraindications

- None Known

Warnings

- Thermoform Sheets are formed at extremely high temperatures; always wear protective gear when working with heated Thermoform sheets.
- Always allow plastic to cool before removing formed sheets.
- Vacuum forming machines operate at high temperatures. Use caution when operating.
- Never leave machine unattended.

Precautions

- Thermoform Sheets should be kept from direct sunlight. If exposed to direct sunlight the sheets may become prone to degradation and discoloration.
- Thermoform Sheets are to be used only as specifically outlined in these directions for use. Any use of these products inconsistent with these directions for use is at the discretion of and the sole responsibility of the practitioner.
- Quality stone or gypsum that produces a hard, dense model is suggested. Softer materials may be dusty. This dust may settle into the finished appliance.
- The model should be dry.
- Always use dry stone models.
- Models should be trimmed to a depth of no more than 3/4 [in] (20 mm) in height.
- Remove the palate of full arch impressions.
- After thermoforming, trim the thermoform sheet accordingly.

Adverse Reactions

- Refer to the warnings and precautions.

Step-By-Step Instructions

The following procedure is based on a Heating/Vacuum System.

1. Clamp the square thermoform sheet into the frame of the forming machine.
2. Wait until heating units are properly preheated.
3. Position the heating unit directly over the sheet and begin timing.
4. For the .040" sheets, the suggested heating time is 40-50 seconds; the sheet should be uniformly sagging down.
5. Enable the vacuum and draw the sheet down over the model.
6. Allow the plastic to cool before removing sheet.

Troubleshooting:

Below is a troubleshooting list in order to estimate the correct heating time and the correct mold to sheet orientation. It is important to note that the heating system uses primarily Radiant Energy to heat the unit. Because of this, the heating element should be kept clean and free of oxidation in order to provide as much radiant energy as possible.

Problem: Material is webbing in front of the mold

Solution: The material is melted beyond its proper forming temperature. Reduce heating time.

Problem: Material is webbing on inside of the mold

Solution: The material is melted beyond its proper forming temperature. Reduce heating time.

Problem: The sheet did not completely form onto the mold.

Solution: The heating time needs to be extended a few seconds to further soften the material. The Vacuum system is clogged or leaking.

Problem: The sheet formed completely around the mold but the walls of the sheet are too thin.

Solution: The heating time needs to be shortened a few seconds to keep the material from heating up too much.