

# Zendura® Thermoformable Sheet Materials

(Zendura REF 9156, 9157, 9163, 9164, 9169, 9171, 9190, 9191, 9192, 9193, 9196)

## Instructions for Use With Pressure Forming Equipment

### Intended Use:

Zendura Thermoformable Sheet Materials are intended for prescription use in the fabrication of orthodontic and dental appliances.

### Description:

Zendura® Thermoformable Sheet Materials allow the fabrication of orthodontic and dental appliances such as aligners, bite plates, mouthguards, nightguards, snoring appliances, splints, retainers, repositioners, and temporary bridges.



#### Contraindications:

This material is contraindicated for patients with a history of allergic reaction to plastics.



**Caution:** Excessive heating time during thermoforming will cause plastic to sag with possible risk of injury to operator.

**Zendura is provided pre-dried in high barrier packaging and should be thermoformed within 15 minutes of opening its protective pouch.**

### Model Preparation

1. The model should be well cured and dry.
2. The model should be trimmed to be around 20-25mm (¾"-1" ) high.
3. Assemble any specialized attachment geometry to the model.
4. Fill in any holes or undercuts on the model with blockout material and let dry.

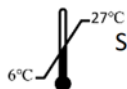
5. **Suggested:** Coat the model with foil liquid separator or model release agent (to prevent the appliance from sticking to the model) and let dry.

### Thermoforming

6. Turn on the thermoformer and enter correct code or adjust timer for Zendura sheet (see chart below).
7. Thermoform using a pressure of 4 bar (60 psi) or above. A higher pressure is preferable.
8. Preheat the thermoformer before placing the model on platform.
9. Open foil pouch. Place the Zendura sheet on the thermoforming frame.
10. Swing the heating element over the Zendura sheet to begin heating until the sheet is ready to be formed. The sheet is ready to be formed when it sags 12 to 20mm (½" to ¾").
11. Move the heating element away from the sheet.
12. Form Zendura sheet over the model with pressurized air and allow the part to cool before handling.
13. Trim and finish the appliance.
14. Wash Zendura appliance with mild soap such as 2% Liquinox and rinse well with water before delivering.

### Trimming Instructions:

1. Cut Zendura appliance off the model using a trimming wheel or a twist drill (1mm diameter for Zendura material). Operate the trimming wheel or twist drill at around 35,000 rpm and cut as close to the finished outline of the appliance as possible. (We suggest leaving at least 3mm of the gingiva.)
2. Remove appliance from the foil, trim off extra parts with crown and bridge scissors or trimming burs.
3. Polish the edges of Zendura appliance with an edge polisher at a speed of around 10,000 rpm.
4. Rinse Zendura appliance with cool water and mild soap before delivering.



Store unopened Zendura sheet packages in a cool and dry place.

## Suggested Zendura Pressure thermoforming settings

Note: Heating times vary between difference machines.

- > If the plastic doesn't form well to the model, add 5 seconds on heating time until conformation is acceptable.
- > If plastic forms webs or folds, reduce heating time until webbing does not occur.

### 0.76mm (0.030") Thickness (Zendura REF 9156, 9157, 9163, 9193)

	Temperature	Heating Time	Pressure	Code
MiniSTAR®	220°C	40 sec	≥4 Bar	142
MiniSTAR® S	220°C	35 sec	≥4 Bar	132
Biostar®	220°C	50 sec	≥5 Bar	162
Drufomat Scan		1 min 20 sec	≥4 Bar	
Erkodent® Units	205°C -210°C	1 min 30 sec		

### 0.625mm (0.025") Thickness (Zendura REF 9190, 9191, 9192)

	Temperature	Heating Time	Pressure	Code
MiniSTAR®	220°C	35 sec	≥4 Bar	132
MiniSTAR® S	220°C	30 sec	≥4 Bar	122
Biostar®	220°C	45 sec	≥5 Bar	152
Drufomat Scan		1 min 15 sec	≥4 Bar	
Erkodent® Units	205°C -210°C	1 min 25 sec		

### 1.02mm (0.040") Thickness (Zendura REF 9169, 9171)

	Temperature	Heating Time	Pressure	Code
MiniSTAR®	220°C	45 sec	≥4 Bar	152
MiniSTAR® S	220°C	40 sec	≥4 Bar	142
Biostar®	220°C	55 sec	≥5 Bar	172
Drufomat Scan		1 min 30 sec	≥4 Bar	
Erkodent® Units	205°C -210°C	1 min 40 sec		

Since Zendura is engineered to have exceptionally high strength, learning to fabricate appliances with this material may require some experimentation. We encourage you to visit [www.ZenduraDental.com/pages/resources](http://www.ZenduraDental.com/pages/resources) for tips on trimming and finishing this material.

MiniSTAR, MiniSTAR S and Biostar are trademarks of Scheu Dental Technology.

Drufomat Scan is trademark of Dreve Dentamid.

Erkodent is trademark of ERKODENT Erich Kopp GmbH.

#### SYMBOLS USED ON LABELING

	Reference or re-order number
	Lot number
	Consult accompanying Instructions for Use
	CAUTION
	Use by date/Expiration date
	Manufacturer
	For use only by or on order of a licensed clinician
	Temperature limit

Manufactured in USA by  
 BayMaterials®

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