

Handling and Converting BERGQUIST GAP PAD TGP 12000ULM

Introduction

Material Versions

- TGP 12000ULM (No reinforcement) Thicknesses Offered
- 40 mil (0.040"/1.02mm)
- 60 mil (0.060"/1.52mm)
- 80 mil (0.080"/2.03mm)
- 100 mil (0.100"/2.54mm)
- 125 mil (0.125"/3.18mm)

For custom thickness, please consult a Henkel representative.

General Product Description

- Thermal Gap Pad[®] 12000ULM is a 120 W/m-K putty in sheet format
- Material is gray in color, very soft, and easily damaged if not converted or handled properly (Use caution when converting or handling)
- The material has similar modulus and tackiness on both sides.
- Standard sheet size is 8.0" x 8.0" (on order system)
- See following sections for pictures of sheet product.

Product Configuration

- 4 mil (0.106mm) thick blue textured polyethylene liner on one side of the material
- 8.75 mil (0.22mm) thick blue textured polyethylene liner on the other side of the material

General Considerations

- Gap Pad[®] 12000ULM is extremely soft, and requires special consideration in packaging, handling, and converting, to ensure optimal material performance and yield. Excessive pressure on products can cause delamination of material to one or both liners. The material will deform plastically (meaning it will not rebound if deformed).
- Some presence of silicone resin on the surface of the material is to be expected, especially on the softer side of the material. Minor hazing on the blue liners is expected due to the gentle characteristics of the material. Figure 2 displays an example of minor hazing.
- If possible, minimize time between converting and using parts. Material has low modulus and die cut pieces can tend to stick together with time.
- Remove liners when needed for converting. Excess handling in removing the liners for visual inspection can cause deformation to the material unnecessary.
- Always use a spatula in removing the converted parts to reduce any deformation.



Figure 1. Showing minor haze on removable liners with converted parts

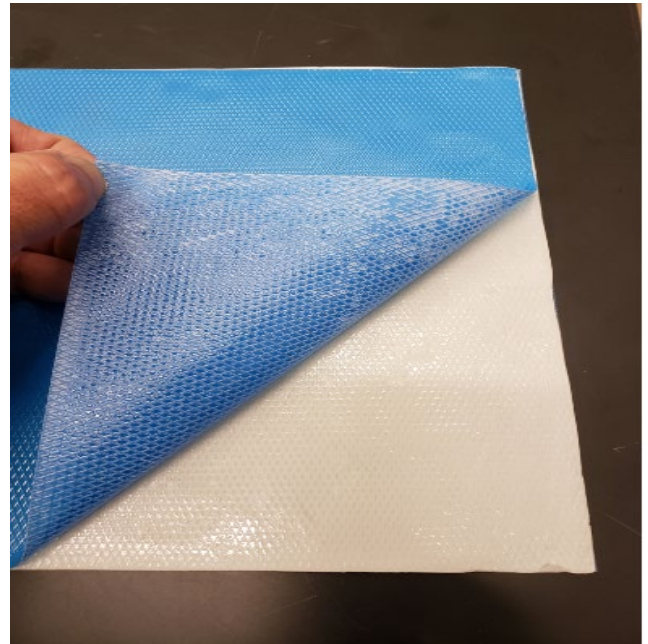


Figure 2. Image showing minor hazing on removable Blue liners.

Application Note

Revision 1.0
February 7, 2020



Packaging, Handling and Storage



Figure 3. Packaging image – Shipped in the white boxes with “Fragile” labels.



Figure 5. Packaging image – Sheets are protected by cardboard and wrapped in plastic covers. Please ensure that a hard surface (like cardboard) is used to support the sheet during handling or transferring.



Figure 4. Packaging image – Sheets are protected by cardboard. Additional packaging is place in the box to reduce and to prevent damage to the sheets.

Application Note

BERGQUIST

Revision 1.0
February 7, 2020

Converting

A blade cutting (sheeter, blade die) is recommended for cutting rectangles. Full sheet dies are preferred. Die cutting the entire sheet within one press cycle (e.g. using clamshell platen press). Steel rule cavity and cluster dies are also possible. Cut through the sheet and kiss-cut to the blue liner.

Some examples with different types of converting equipment are shown on the following page. Extreme care and handling must be taken during the converting process to avoid damage of the material due to the soft, putty-like nature of the material.



Figure 5. Remove liner carefully to expose one side of the material.

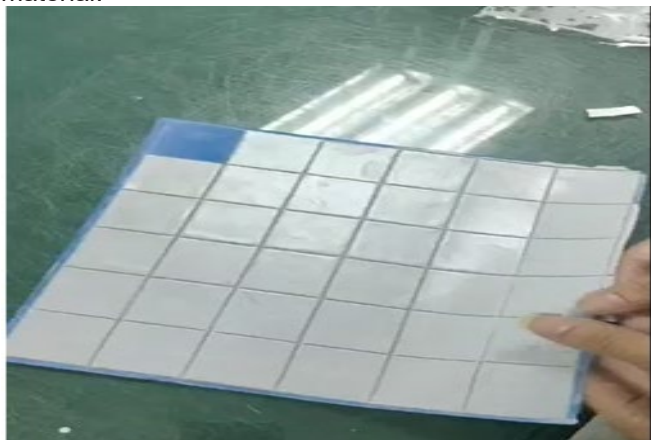


Figure 6. Carefully remove waste from the edges after converting.

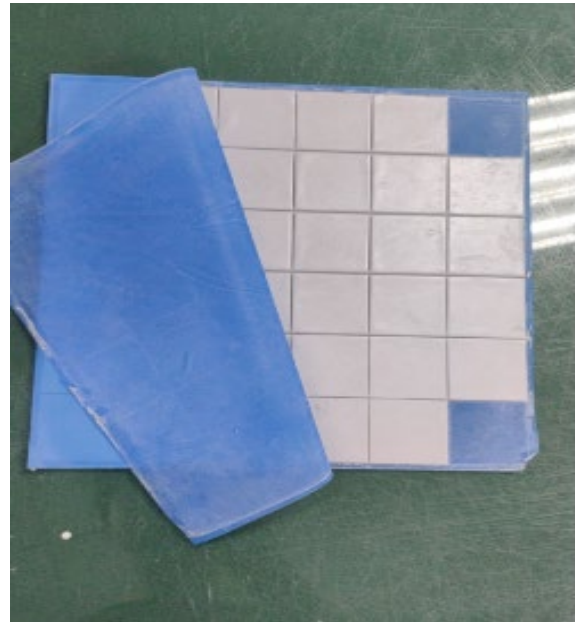


Figure 7. Replace the Blue liner on the Converted Parts after waste removal on the edge.



Figure 8. A tool (i.e. spatula) is strongly suggested to remove converted parts.

Application Note

Revision 1.0
February 7, 2020



Figure 9. Sheeter



Figure 10. Clamshell platen press



Figure 11. Custom full sheet cutting die for clamshell or clicker press

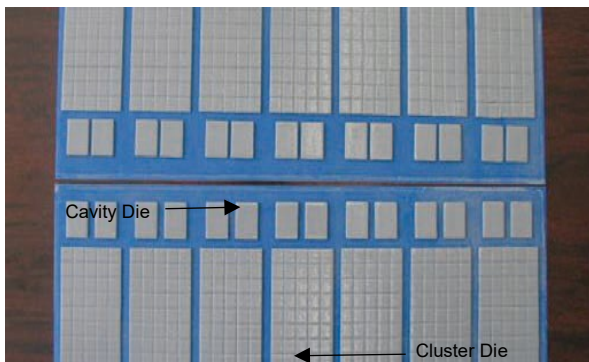


Figure 12. Example of a converted sheet with different sizes

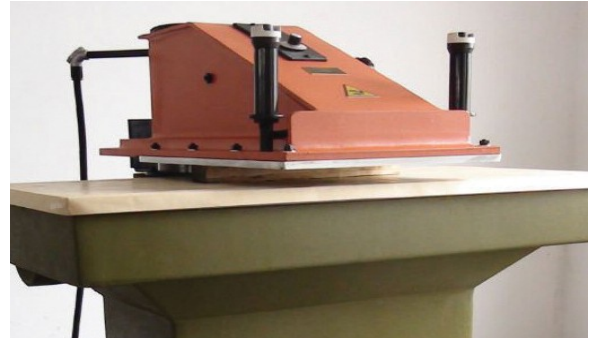


Figure 13. Clicker Press

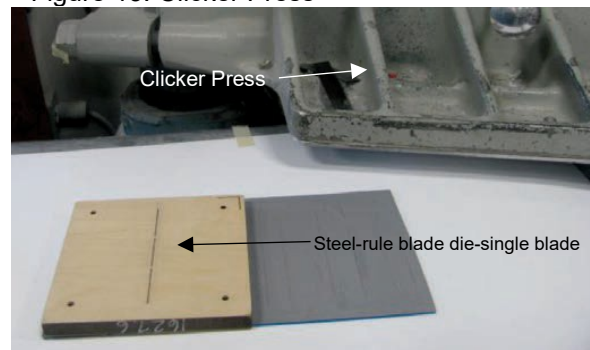


Figure 14. Clicker press and die

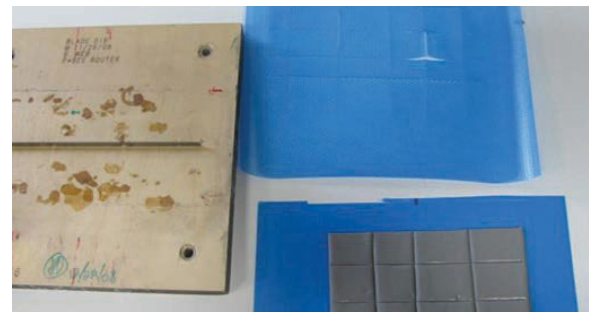


Figure 15. No ejection material, or die packing is required on a blade die

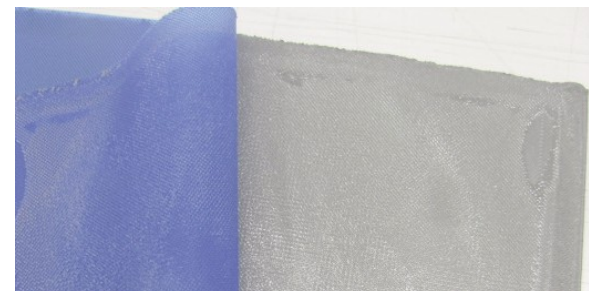


Figure 16. Example of having on the blue liner when pulling the liner off- this is normal and does not impact form, fit, or function

Application Note

Revision 1.0
February 7, 2020



Handling

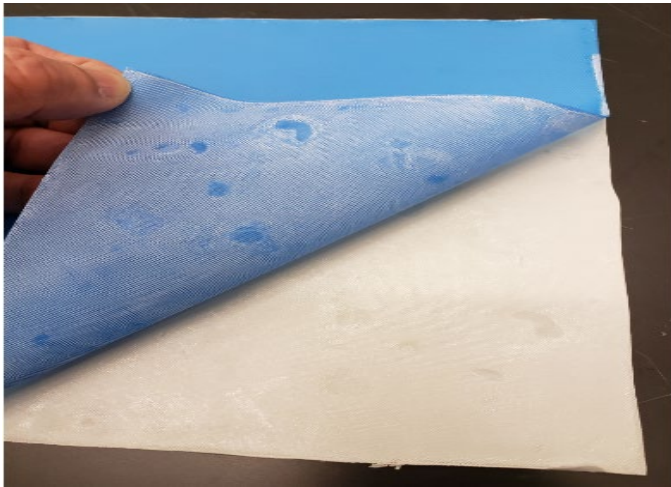


Figure 17. Remove blue liner prior to converting

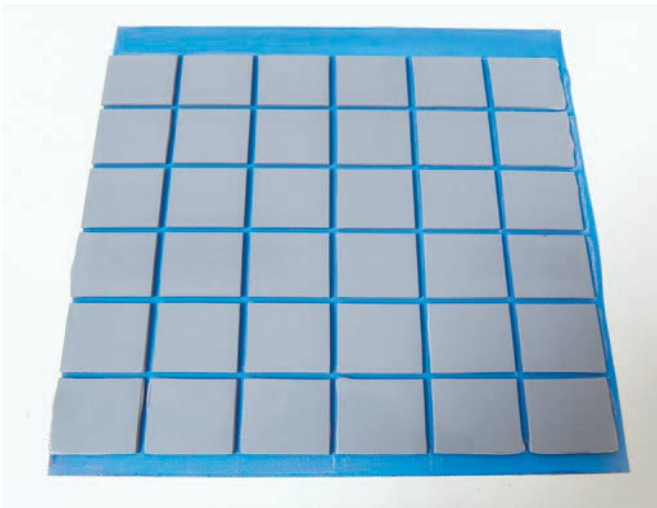


Figure 18. Kiss cut to the blue liner and cover converted parts with a protective liner. If required, material can be die cut with a stretchy (polyethylene) liner on top to protect the sheet during the converting process.



Figure 19. Use caution when handling converted parts as the

material will distort in shape and will not rebound to the previous shape. Always have a support underneath the materials when transferring.

Web Peel

Any waste web must be peeled slowly (less than 150 cm/min, or 60 inch/min), and at a low peel angle. See graphic below. Excessive speed of peel, or peeling at too great an angle, can cause delamination of material to carrier liner as shown below.

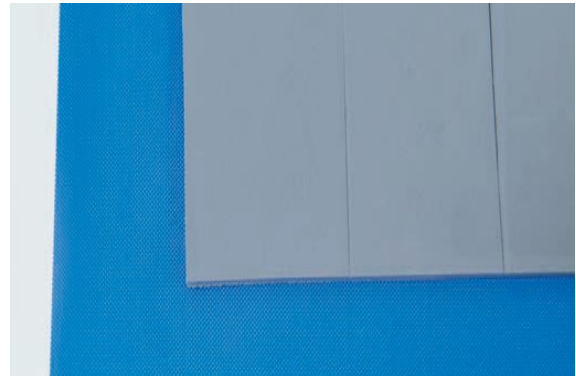


Figure 20. Example of slow web peel

To minimize delamination of material to carrier sheet, peel slowly from liner

Removing converted parts from sheet

Removal of the die cut part from sheet: end users should peel parts from the carrier liners slowly, and at a low angle (Peel speed and angle per below).

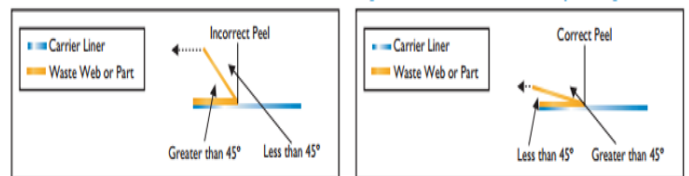


Figure 21. Illustration showing the peel angle of the liner.

If you have any questions, please contact your Henkel representative.



Application Note



Revision 1.0
February 7, 2020

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