THINK LIGHTWEIGHT®
LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

Edge Process

www.thinklightweight.com

LIGHTWEIGHT PANEL EDGING

- Lightweight Panel Edging
  - One of the first questions that comes up after a customer recognizes the unique advantages of lightweight panels is:

“How do I edge it?”

LIGHTWEIGHT PANEL EDGING

- We categorize the solution to this question into the following 6 areas:

  - Core characteristics
  - Skin thickness
  - Edging material
  - Adhesives
  - Process parameters
  - Edge fill process

LIGHTWEIGHT PANEL EDGING-CORE

- Core characteristics
  - Minimal contact cores- 3/8” Comb Light/Structa Light
    - Minimal contact cores require a higher strength adhesive
  - Medium contact cores- Light Tack, 1/8” Comb Light, 1/8” Luxa Light, Foam Light
    - Medium contact cores require a medium strength adhesive with good penetration and cross linking
    - Foam Light requires a low temperature adhesive so that the core material is not affected

LIGHTWEIGHT PANEL EDGING-SKIN

- Skin thickness
  - Skin thickness on minimal contact cores should be ¼” minimum for proper edge adhesion
  - Skin thickness on medium contact cores should be 3 mm minimum for proper edge adhesion

LIGHTWEIGHT PANEL EDGING-EDGE MATERIAL

- Edge material
  - Standard edge materials such as 0.018”, 1 mm, 2 mm, 3 mm PVC and wood edge banding can be applied to lightweight panels
  - Thinner edges must be tested to ensure that there is no telegraphing as there is not full support behind the edging as in a typical edging application

LIGHTWEIGHT PANEL EDGING-ADHESIVES

- Adhesives
  - We have researched the edge band adhesives market extensively and recommend the following adhesive for lightweight panel edging applications
  - Jowatherm 282.20 low temperature hot melt adhesive(spec sheet next page)
  - In addition, for a superior bond please review a further slide which offers a PUR edging process compatible with standard edge banders

LIGHTWEIGHT PANEL EDGING- EVA ADHESIVES

Jowatherm®

282.20

EVA hot melt adhesive

Application: Designed for contour edgebanding of PVC, paper, and polyester at low application temperatures and at very slow feed speeds.

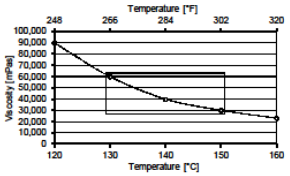
Characteristics/ Directions for use: Low viscosity hot melt with fast melting properties, long open time and good color and heat stability in the melt.

Application Temp.:	130-150°C (266-302°F)
Feed Speed:	roller application: 5-20 m/min (15-60 ft/min)

The structure of the edge material and working conditions may influence the bond. Tested according to Jowat test methods. Customer trials are recommended.

Technical Data:

Density [g/cm³]:	approx. 1.3 (10.8 lbs./gal)
Softening point:	approx. 90°C (194°F) Ring & Ball
Appearance:	20 - natural; 21 white



Cleaning: Preliminary cleaning while hot by scraping with a spatula.

Storage: May be stored in properly closed original containers, cool and dry (15-25°C (59-77°F)). Best before date, please refer to label on the packaging unit.

Packaging: In plastic bags of 44 lbs. net.

Remarks: For further information concerning handling, transport and disposal, please refer to the Material Safety Data Sheet. Our information on this data sheet is based on test results from our laboratories as well as on experience gained in the field by our customers. It can, however, not cover all parameters for each specific application and is therefore not binding for us. The information given in this leaflet represents neither a performance guarantee nor a guarantee of properties, nature, condition, state or quality. No liability may be derived from these indications nor from the recommendations made by our free technical advisory service.

06/15

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All data indicated are characteristics represented as average values. Our technical data sheets are constantly revised to represent the latest state of technology. This edition is replacing all previous ones, and is valid on the date of compilation.

Jowat

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LIGHTWEIGHT PANEL EDGING-PUR ADHESIVES

Jowat introduces **Jowatherm-Reaktant®**, a Polyurethane (PUR) edgebanding hot melt adhesive, available in cartridges and granular for use in standard edgebanding equipment.

JOWATHERM-REAKTANT®

- Works on a wide range of banding material, including metal.
- Crosslinking formula which cures to a permanent bond.
- Water proof when cured.
- High heat resistance with good elasticity at low temperature.
- Less adhesive needed for a very fine, "invisible" glue line.
- Granular, manufactured with patented process, will work in an edgebander with a standard glue pot.
- Flushing agents available with chemical additive to prevent crosslinking.

Granular

Jowatherm-Reaktant®	607.60 natural
Jowatherm-Reaktant®	607.61 white

Cartridges (Holz-her)

Jowatherm-Reaktant®	607.30 natural translucent
Jowatherm-Reaktant®	607.31 white
Jowatherm-Reaktant®	607.60 natural
Jowatherm-Reaktant®	607.61 white

Flushing Agents

Jowat® 930.74	(for 607.3X)
Jowat® 930.94	(for 607.6X)

Jowat Adhesives

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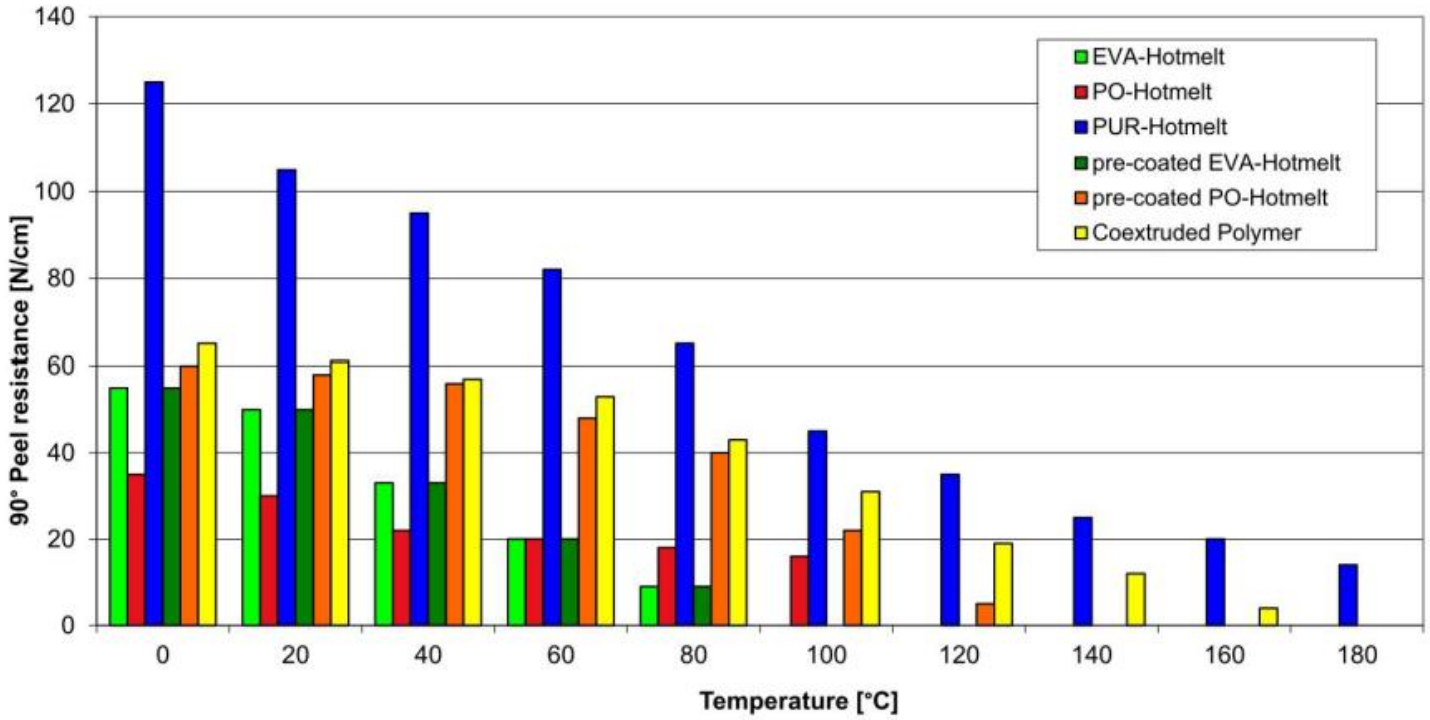
LIGHTWEIGHT PANEL EDGING-ADHESIVES TESTING

Adhesives testing

- The following slide is a comparative test document showing test results of standard hot melt, Jowatherm 282.20, Jowatherm-Reaktant and other edge adhesives on substrates

LIGHTWEIGHT PANEL EDGING-ADHESIVES TESTING



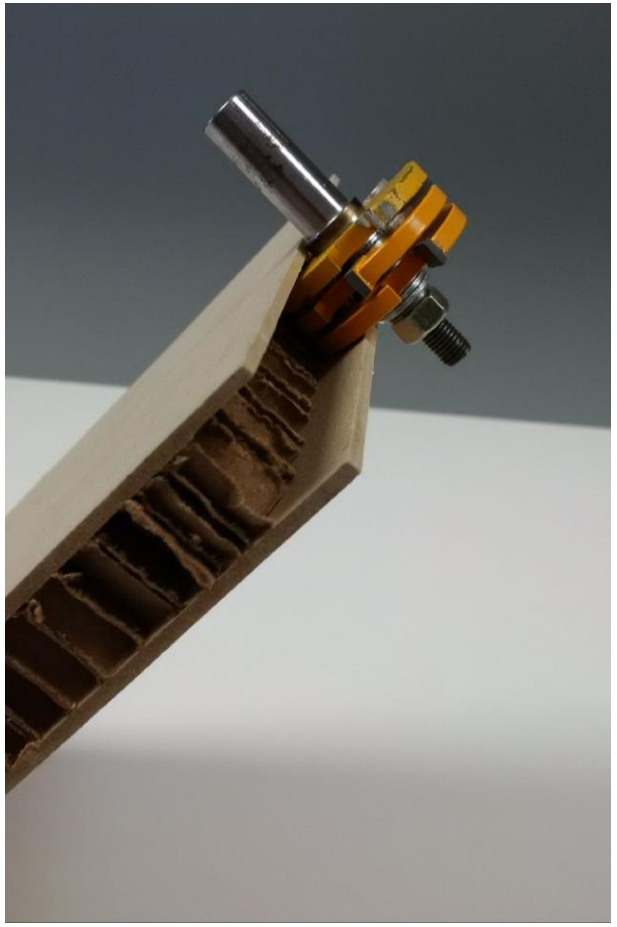
LIGHTWEIGHT PANEL EDGING-PROCESS PARAMETERS

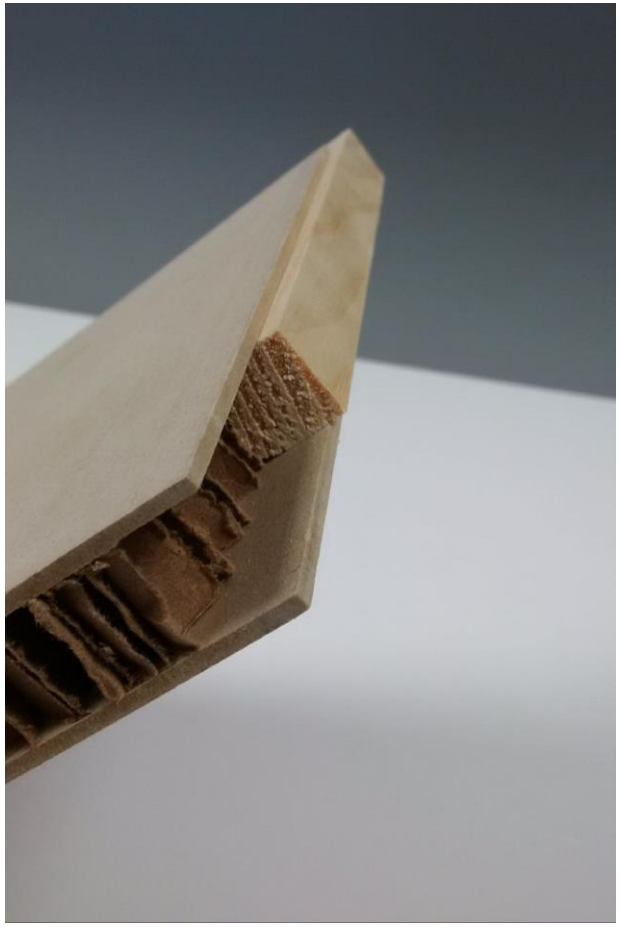
- Process parameters
  - Lightweight panels obviously do not have the compression strength of solid materials such as MDF, particle board and plywood
  - As a result care must be taken in edge bander settings to ensure the product is not crushed. This is easily adjusted, but must be set properly
  - End trimming of thin edging must be monitored as there may be some compression of edging over the core at corners

LIGHTWEIGHT PANEL EDGING- EDGE FILL PROCESS

- Edge fill process
  - Edge fill process is easily performed manually as illustrated on the following slides
  - If there is a large volume of this required it is much more cost effective to purchase framed individual panels or full sheets with frame material located strategically

LIGHTWEIGHT PANEL EDGING-EDGE FILL PROCESS





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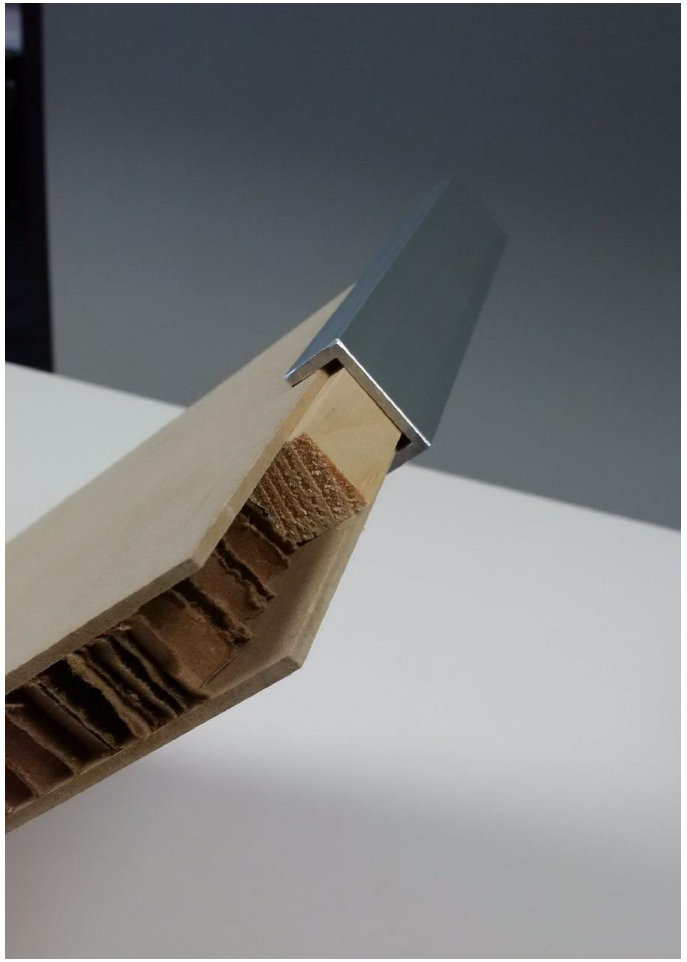
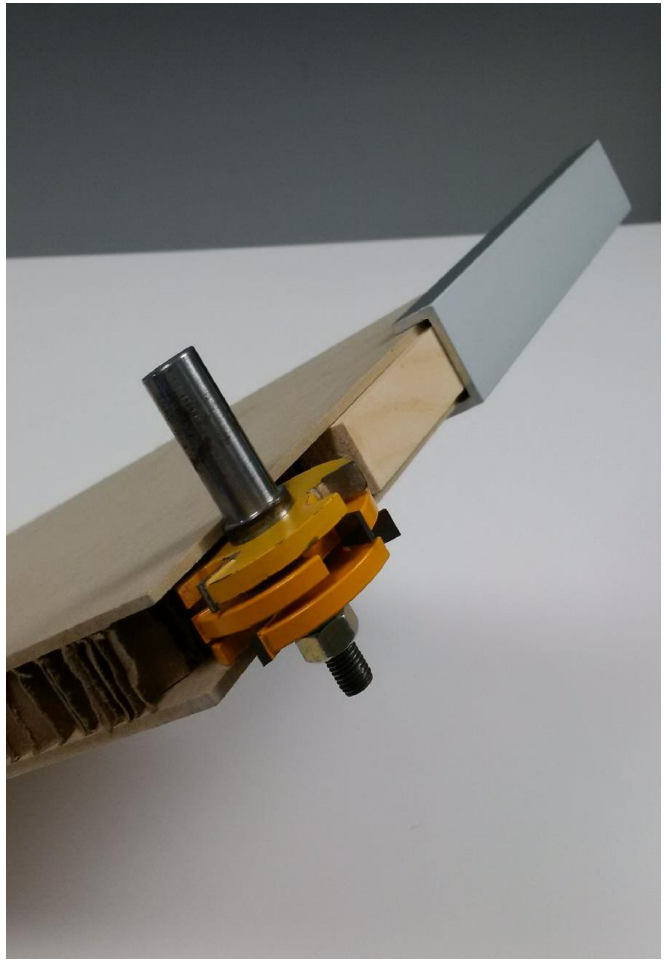
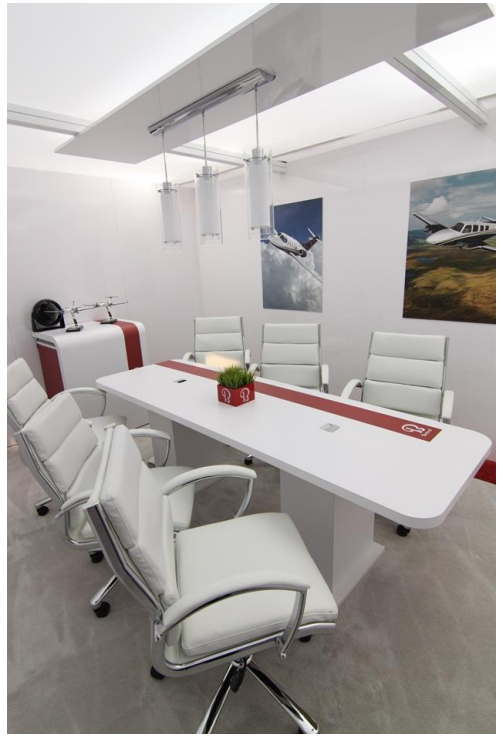


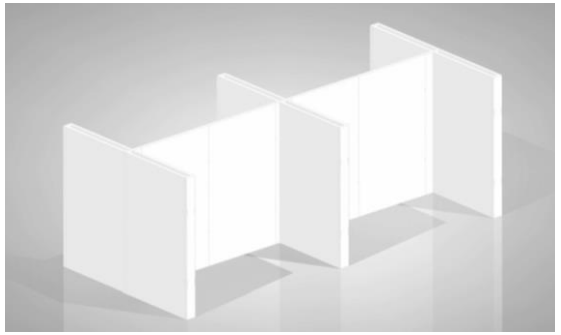


LIGHTWEIGHT PANEL EDGING-DISCLAIMER

- Disclaimer
  - This document is for reference purposes only and the customer must test to ensure that they are satisfied with the process before proceeding to production. The fabricator is 100% responsible for the edging application and ensuring that the application meets the requirements of their project. Think Lightweight does not take any responsibility for edging failure.

MINIMIZE MATERIALS, MAXIMIZE RESULTS





THINK LIGHTWEIGHT®

LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

FOAM LIGHT®

3/8" COMB LIGHT®

LIGHT TACK®

1/8" COMB LIGHT®

1/8" LUXA LIGHT®

STRUCTA LIGHT®

Thinklightweight.com