

DISPA®

DISPA®

Product- and processing information
Edition 12-2016

Content

Subject	Page
<u>1.Product</u>	3
<u>2. Product Handling</u>	8
<u>3. Product Applications</u>	10
<u>4. Product Range</u>	12
<u>5. Processing</u>	16
<u>5.1. Printing</u>	17
<u>5.2. Cutting</u>	18
<u>5.3. CNC-Processing</u>	20
<u>5.4. 3D-Processing</u>	21
<u>5.5. Die Cutting</u>	24
<u>5.6. Laminating</u>	25
<u>5.7. Gluing</u>	26
<u>5.8. Sawing</u>	27
<u>5.9. Hanging</u>	28
<u>6. Disposal</u>	29

1.Product

1. Product



PRINT IT. HANG IT. RECYCLE IT. PRINT IT.



RECYCLE IT. PRINT IT. HANG IT.



1. Product

DISPA[®] at a glance

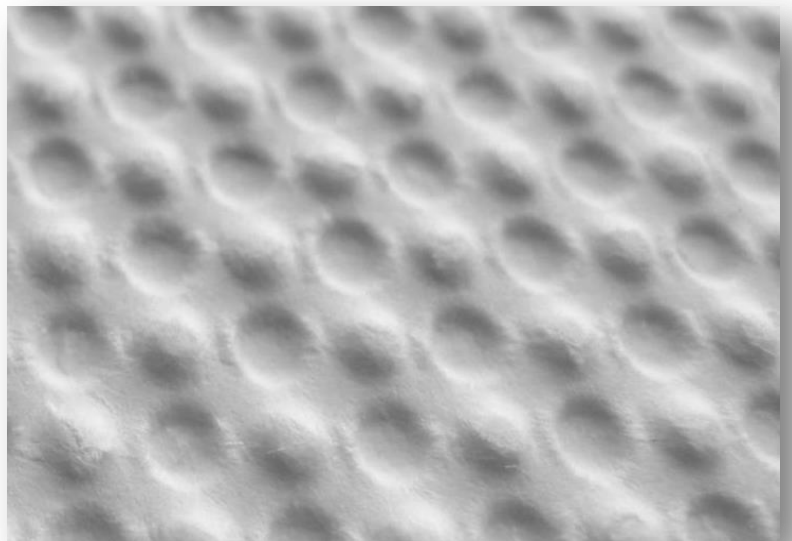
- Lightweight- easy to work with and hang
- Bright white and smooth surface
- Sign starts flat and stays flat
 - strong
 - rigid
 - stable
- 100% paper– 100% recyclable
 - Helping you to meet your environmental targets



1. Product

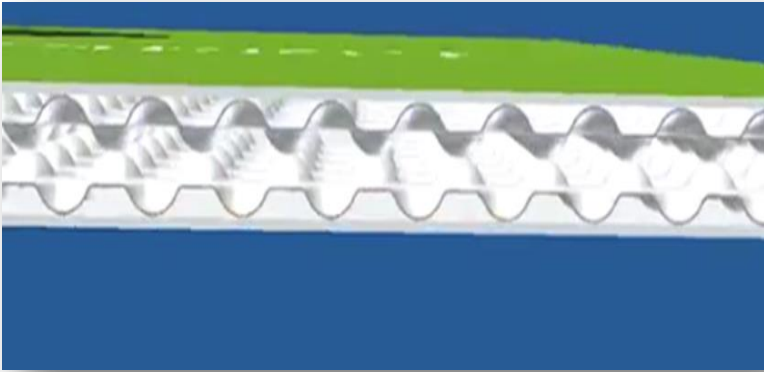
DISPA® at a glance

- Laminated structure from embossed formed paper using an innovative, unique and patented manufacturing process
- Easy processing
- Short delivery times of standard sizes
- Delivering the highest standards of quality concerning the 3A Composites policy



1. Product

The core technology



- Result from extensive analysis and tests of various embossed profiles
 - No directional property stability
 - No directional property circulation of air
 - No outlines of the profile on the top layer



2. Product Handling

2. Product Handling

- Transportation:
 - Handle with care;
DISPA[®] boards are fragile, take care of edges
 - Never transport DISPA[®] unpacked
- Storage:
 - Always flat
 - Temperature: 18-24°C
 - Rel. Humidity of the air: 45-60%
- Preparation before Printing or Laminating
 - Acclimatization of the board
 - Ideally 24 hours before use
 - In the same conditions where you will work (temperature and humidity)
 - Unwrap the foil of the palette

3. Product Applications

3. Product Applications

Perfect substrate plate,
that will look as good when it is taken down
as it did on the day it was hung:

- Perfect solution for short term promotional campaigns
- Hanging signs
- Display and POS/POP applications



4. Product Range

4. Product Range

Standard formats ex stock

Thickness in mm	Length in mm	Width in mm	Packaging unit sheets
3,8	1840	1250	250
3,8	2450	1250	250
3,8	1016	1524	250
3,8	3048	1524	250

4. Product Range

Standard formats ex production

Thickness in mm	Length in mm	Width in mm	Packaging unit sheets
3,8	1840 / 2450	1250	125
3,8	1016 / 3048	1524	125
3,8	1016	1524	20 in a box

4. Product Range

Special sizes on request

Thickness in mm	Length in mm	Width in mm	Minimum order in m ²
3,8	1000 - 3050	1150 - 1524	1.000



5. Processing

- 5.1 Printing
- 5.2. Cutting
- 5.3. CNC Processing
- 5.4. 3D Processing
- 5.5. Die Cutting
- 5.6. Laminating
- 5.7. Gluing
- 5.8. Sawing
- 5.9. Hanging

5.1. Printing

- High quality results for UV- digital flatbed printing
- Intensity of the UV- lamps can be reduced because of the good adhesion to the surface.
 - If so: fullsize prints and/or high saturated colours, please tape the edges (i.e. crepe)
- Easy to use screen printing

For double sided printed applications one side has to be completely dry.

Then the 2nd side can be printed.



5.2. Cutting

- Single DISPA® boards could be easily cut with a utility knife
- Also with a plate / bench shear :
 - Here you can also cut 2-3 boards at the same time.

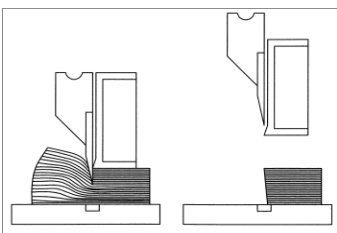


5.2. Cutting

- Several boards could be cut with a guillotine:
 - Max. 6 on a stack
 - Reduce the pressure of the pressing bar to the lowest level
 - A suffer board (grey carton or an additional DISPA®board) should be used on the top of the stack to have an evenly spreaded pressure of the pressing bar.
 - Alternativly you can widen the press bar by attaching a thin solid material (3mm PVC, grey carton) underneath to get the same effect
 - If necessary turn the top board for cutting from the back, so you will have the pressure mark not on the front of the picture.
 - When cutting smaller sizes you can put several stacks next to each other
 - If you cut a board equatorial you have to do a double cut at the rear with apprx. 3-4 mm .
- We recommend a HSS cutting line with an angel of 22° without a pre bevel

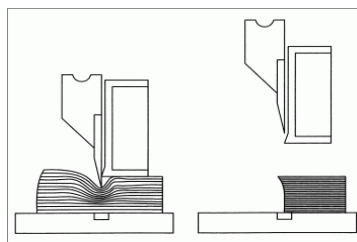
If you have a discriminating job a test should be made in advance.

Possible failures:



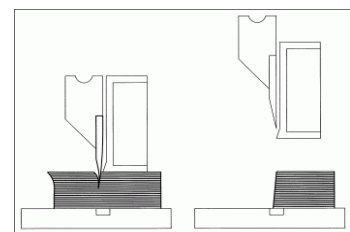
Undercut:

- Too many boards in the stack



Mushroom type cut:

- Insufficient clamping pressure
- Blunt knife



Overcut:

- Excessive clamping pressure
- Excessive sharp knife angle

5.3. CNC-Processing

- For cutting round shapes on a CNC-table we recommend oscillating blades.
- For cutting straight edges firm blades can be used.
 - This way of cutting is quicker.
- For 3D-processing we recommend a v-cut tool
(see chapter 5.4)

A specially designed grooving wheel for DISPA[®] is only available from Elitron.

5.4. 3D-Processing

Owing to the consistent lay-out of the embossments inside the boards **DISPA®** can be processed in transverse as well as in longitudinal direction of the paper fibres.

ZÜND/Aristo:

- It is recommended to make v-cuts only by using blades that are exclusively used for cutting DISPA®.
- When using blunt blades the inner layers may be released from the outer ones and could be torn out.
- V-cut depth approx. 2.8 mm

ESKO-Kongsberg:

- V-shape grooving wheel with approx. 80% material compression
- Or V-cut (see ZÜND/Aristo)

Elitron/AGFA:

- Use DISPA® grooving wheel.
- When v-cutting the cut has to be extended by 2.5 cm at both ends (if the cutting file allows this, see picture on page 21).

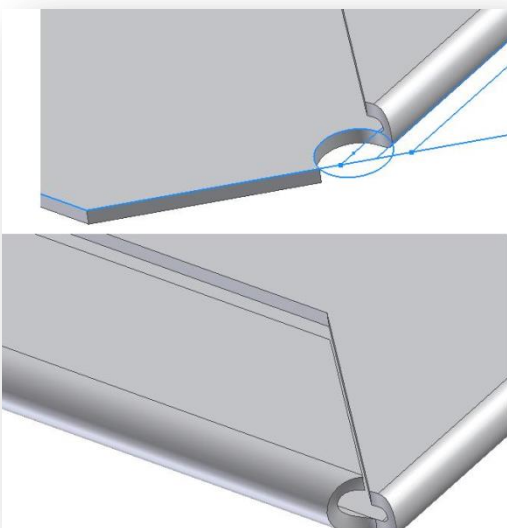
All specifications are approximate and have to be adjusted to the respective machine individually!

In case of further questions the customer service of the respective machine manufacturer has to be contacted.

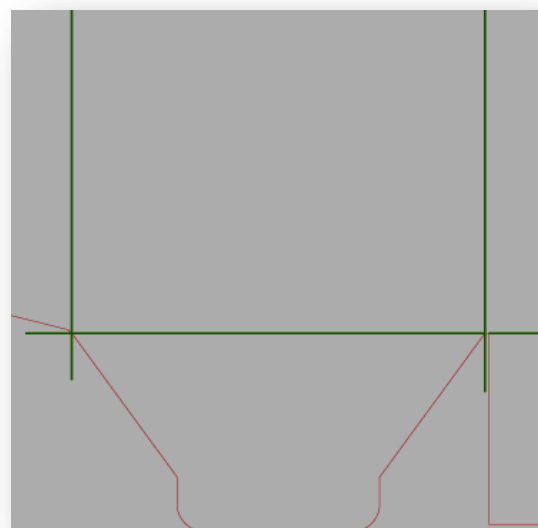
5.4. 3D-Processing

Creation of cutting files:

- Every machine manufacturer uses different software for the creation of cutting files.
 - This software is always based on vector files.
- Nearly every software has a library for the creation of packaging standards:
 - FEFCO
 - ECMA
- When choosing such a standard the thickness of the material to be processed has to be indicated.
 - Please choose for DISPA® the thickness 4.5 mm!
 - Please choose as type of material: corrugated board!
 - By doing this tensions are taken from the material and the edges do not break so easily.
- Should they break despite this the design can be modified additionally by making round corners.



Making round corners



Extension of the v-cut

5.4. 3D-Processing

Due to the evenly spreaded hemispheres of the core you can work on DISPA® in and against the running direction the same way

- **We recommend to use only new and sharp blades for V-groove cuts.**
- **The blades should only be used for DISPA®**
- **Otherwise: the middle layers could detach from the surface layers.**

5.5. Die Cutting

- Settings of semiautomatic punching presses can be taken from bookbinding cartons.

- Die cutting tools can have toothed or smooth cutting lines.



- We recommend the use of foam rubber over the entire cutting surface for uniform distribution of pressure.



- Depending on the radius of the contour it would be enough to have the foam rubber only along the cutting lines. (apprx. 1cm)
- If there are creasing lines in your die cutting score,
- We recommend to use channels on the opposite site of the platen



5.6. Laminating

- Because of the growth behavior of paper only a two- sided lamination is recommended.
- Analogue to the application areas DISPA® are ideal for a double sided offset sheet lamination.
 - A PVA works faster
 - Starch glue (Dextrin) dries slower and the board stays more flat



5.7. Gluing

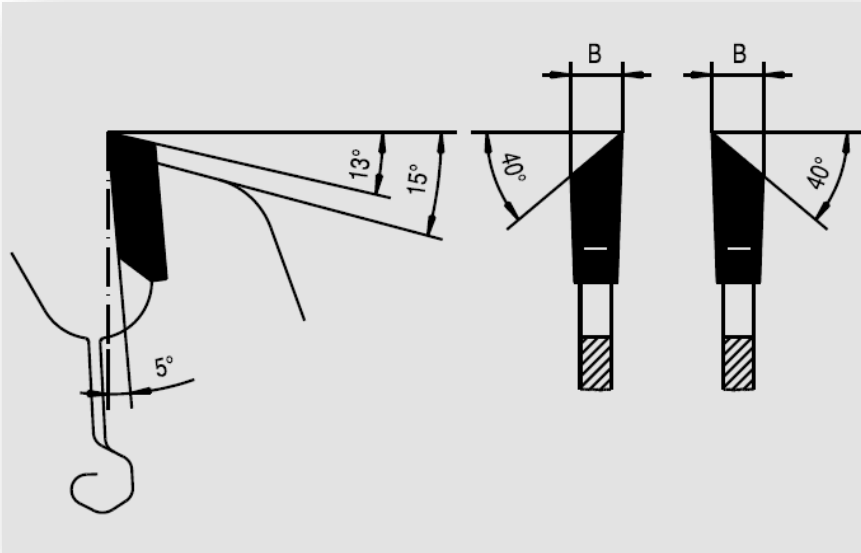
- Any kind of glue for paper can be used.
 - Hotmeltglue
 - Solventglue
 - Solvent-free glue, etc.
 - PVA
 - Starch glue

Be aware: DISPA® is an paper based product. Paper is growing and shrinking in environment with humidity.

The more water the glue contains the more is DISPA® working.

5.8. Sawing

We recommend the following geometry of a saw blade for bench and panel sizing saws :



- Alternate bevel tooth, 40°, bevel angle
 - e.g. guhdo 2195 HC piano plus
- For cleanest cuts

5.9. Hanging

To hang DISPA[®] you can additional use eyelets.



- The eyelet should have distance to the edge of the board of minimum 2cm.
- Otherwise the structure of the board cannot hold the pressure of the die and parts around the eyelet could crack.

6. Disposal

6. Disposal

100% PAPER – 100% RECYCLABLE

DISPA[®] can be easily disposed after use in the paper waste.

DISPA[®] can be assigned to the following waste paper grade:

EN 643:2014 3.13.00

New cuttings of unprinted white multiply board, containing woodfree, mechanical or thermo-mechanical pulp plies, but without grey plies

