MIRROR Hologram & Pillars of Light

Technical Data Sheet MIRROR Hologram & Pillars of Light, Base Material:

	Method		+/-	330 g/m²
Basic Weight	ISO 536	g/m²	4%	300
Caliper	ISO 534	pt	5%	15.6
Thickness	ISO534	µm	4%	395
Opacity*	ISO 2471	%	-	98.6
Bending stiffness L&W 5° - MD	ISO 5628	mNm	-	38.5
Bending stiffness L&W 5° - CD	ISO 5628	mNm	-	16.0
Bending resistance L&W 15° - MD	ISO 2493-1	mN	-15%	405
Bending resistance L&W 15° - CD	ISO 2493-1	mN	-15%	180
Bending moment Taber 15° - MD	ISO 2493-2	mNm	-	19.6
Bending moment Taber 15° - CD	ISO 2493-2	mNm	-	8.7
Tensile strength - MD	ISO 1924-2	kN/m	-	25.5
Tensile strength - CD	ISO 1924-2	kN/m	-	12.5
Tearing resistance - MD	ISO 1974	mN	-	4300
Tearing resistance - CD	ISO 1974	mN	-	4600

**Refers to Base Material*
Bending Moment Taber is a calculated value based on a correlation factor of 20.7.
FSC®-certified, Recyclable, certified as industrially biodegradable and compostable in compliance with the demands in the Directive EN 13432:2000.

PET foil as top layer: ~ 30g/m²

Processing – Technical guidelines

Material composition:

- Solid bleached board, SBB, entirely based on fresh fibres. Coated on one side.
- Front side metallized, with a glossy, crystal-clear 12 µm PET film as the top layer. Foil is food contact proof.

Storage:

- Store packaged, indoors, at a relative humidity of 40–60%.

Handling (Important!):

- Due to the metallization, a uniform, mirror-like surface is created. While this effect is intentional and visually appealing, it also means that fingerprints, scratches, and creases become visible more quickly and more prominently than on conventional paper.
- We therefore recommend wearing unpowdered surgical gloves or cotton gloves at all stages involving manual handling.

General Printing

With suitable printing inks and appropriate machine settings, the metallized side can be printed using the following methods:

- UV offset printing
- UV LED offset printing
- UV inkjet printing
- Screen printing

- Conventional offset printing with foil inks / oxidatively drying inks. When using conventional offset printing, particular attention must be paid to the very slow drying time. Especially for small batches, sheets should be laid out after printing and high stacking should be avoided.

In all cases, we recommend conducting a print test in advance.

Digital Printing: must be tested

Water-based inkjet: Very likely to be ruled out due to the material's lack of absorbency.

Laser toner: must be tested. The big topic here is, if the toner can be discharged, i.e. transferred well over the entire surface. Most likely full-surface prints will be difficult, whereas small parts of text of similar will be easier.

Printing with Hologram Effect

The same conditions apply as for general printing.
Special feature: When using conventional halftone printing (AM, amplitude-modulated) in offset printing, moiré effects* may occur on holographic surfaces. In this case, please adjust the screen angles; therefore, a test print is strongly recommended. In most cases, rotating the screen by 5–7° is sufficient. Alternatively, printing with a frequency-modulated (FM) screen is recommended, as this completely eliminates the risk of moiré effects.

**The moiré effect is an optical phenomenon in which the superimposition of regular patterns creates a new periodic pattern. This resulting pattern exhibits specific structures that are not present in any of the individual patterns and that change when the superimposition is altered.*

Finishing:

With suitable materials and appropriate machine settings, the metallized surface can be finished using:

- Film lamination
- Hot foil stamping
- UV varnishing, both spot and full-surface
- Blind embossing, relief embossing, and debossing, with the limitation that embossing edges will appear softer than on conventional paper
- Die-cutting, creasing, perforating

Further processing:

Bookbinding, die-cutting, creasing, perforating, stapling, etc. require appropriate care:

- To avoid fingerprints, wear unpowdered surgical gloves or cotton gloves.
- To prevent scratches, lift sheets from the top of the stack rather than pulling reams sideways.
- To avoid visible creases, bend as little as possible; using smaller stacks can help.
- In fully automated bookbinding, position any potentially scratching transport guides or hold-down devices in trim areas, or protect them with soft covers.
- Manual gluing: use double-sided adhesive tapes.
- Fully automated gluing in folding carton gluing machines: use specialized adhesive systems suitable for PET surfaces.
- In both cases, prior testing by your team is required.