

Polyvinyl butyral (PVB)

PVB thin films

Thin Film

POLYVINYL BUTYRAL
PVB Thin Film

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1. Mowital[®] Thin Film

THIN FILM

Mowital[®]

Mowital[®] Thin Film

1. Mowital® Thin Film

Grade	Thickness	Width of Roll	Length of Roll
Mowital® Thin Film 050	50 µm	1 m	1500 m
Mowital® Thin Film 075	75 µm	1 m	1500 m
Mowital® Thin Film 100	100 µm	1 m	1500 m
Mowital® Thin Film 250	250 µm	1 m	300 m

- Application → **Adhesive laminate film**
 - Lamination of films components and fibre structures
 - Roll-to-roll lamination processes
 - Combination of different materials
 - Multilayer structures

2. Advantages of Mowital® Thin Film

Advantages
THIN FILM
Mowital® Thin Film

2. Advantages of Mowital® Thin Film

- Excellent adhesion to glass (glass fibres), metals, ceramics, wood and fabrics
- Very good adhesion to most plastics
- Thermoplastic material
- Cross-linkable with epoxies, phenolics, isocyanates, etc.
- High transparency
- No migration of additives or plasticizers
- Solvent- and dust free, no health and safety issues

3. Key parameters of Mowital® Thin Film

Parameters

THIN FILM

Mowital® Thin Film

3. Key parameters of Mowital® Thin Film

	PVB Film	Mowital® Thin Film
Elastic modulus [N/mm ²]	~ 100	2.300 - 2.400
Tensile strength [N/mm ²]	>23	45-60
Elongation [%]	>280	4-7
T _g [°C]	18-20	70
Softening range [°C]	90-100	180-210
Refractive index	1.48	1.48
Surface resistivity [Ohm x m]	10 ¹¹ -10 ¹²	>10 ¹²
Volume resistivity [Ohm]	10 ¹¹ -10 ¹²	>10 ¹²
WVTR [g * 50 µm / (m ² *d)]	n/a	40-45
OTR [g * 50 µm / (m ² *d)]	n/a	680-700

Tg: Glass Transition Temperature; WVTR: Water vapour transmission rate; OTR: Oxygen transmission rate

4. Applications of Mowital® Thin Film

Applications
THIN FILM
Mowital® Thin Film

4. Applications of Mowital® Thin Film

4.1. Composite applications

Replacement of thermosetting resins

- Enhanced shelf-life of pre-pregs
- Solvent-free application
- Odor-free and toxicologically safe
- Controlled delamination for enhanced energy absorption
- Excellent adhesion to aramides, glass-, carbon- and polyester-fibres

4. Applications of Mowital® Thin Film

4.2. Lamination of different materials

Mowital® Thin Film for lamination of different materials

- Very good adhesion on polar materials (glass, wood, metals...)
- Good adhesion on plastics → application as tie layer possible
- Easy hot press / roll lamination process

Thank you!

THANKS!

Thank you!