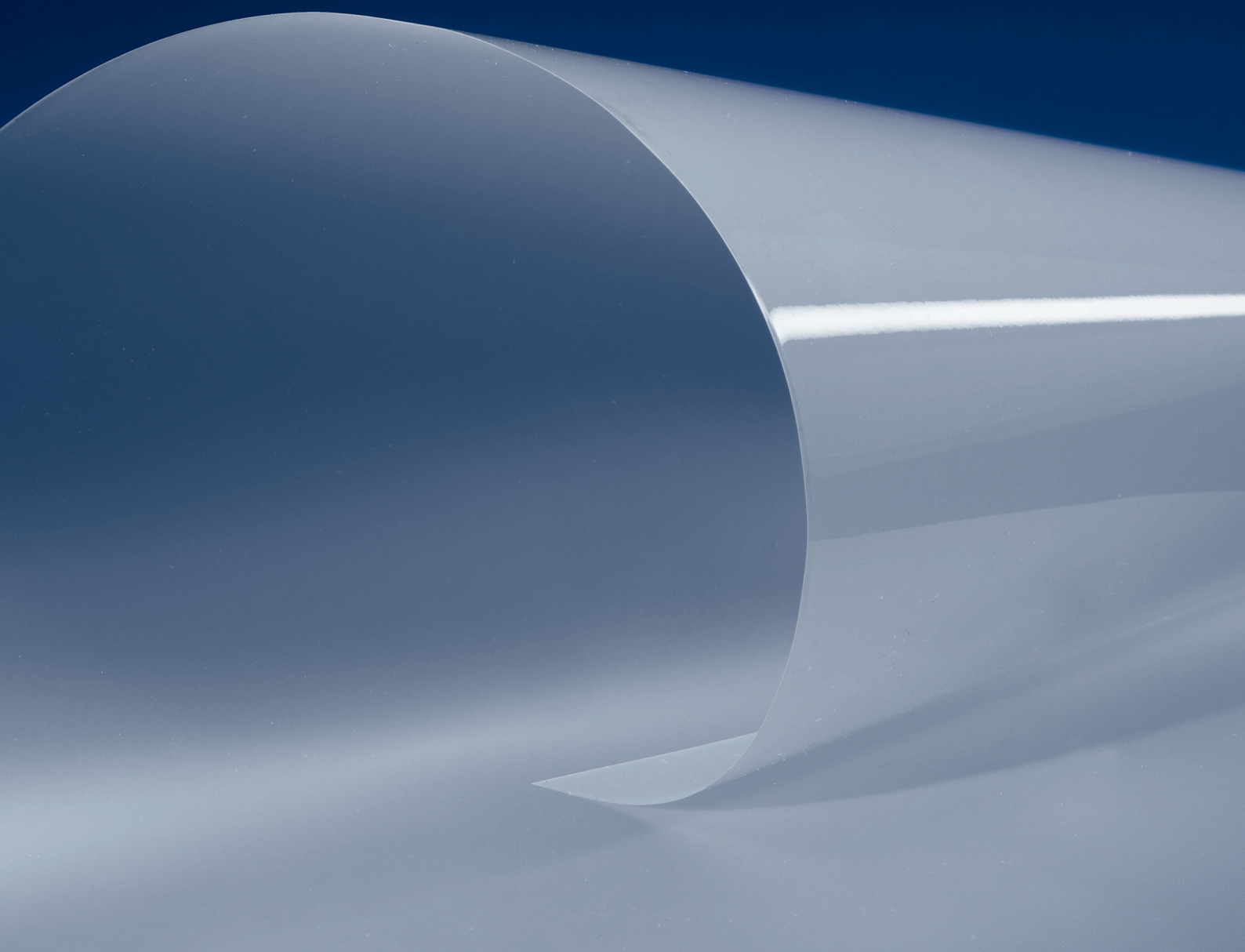


We are binding

MOWITAL® THIN FILM – our specialized interlayer



kuraray

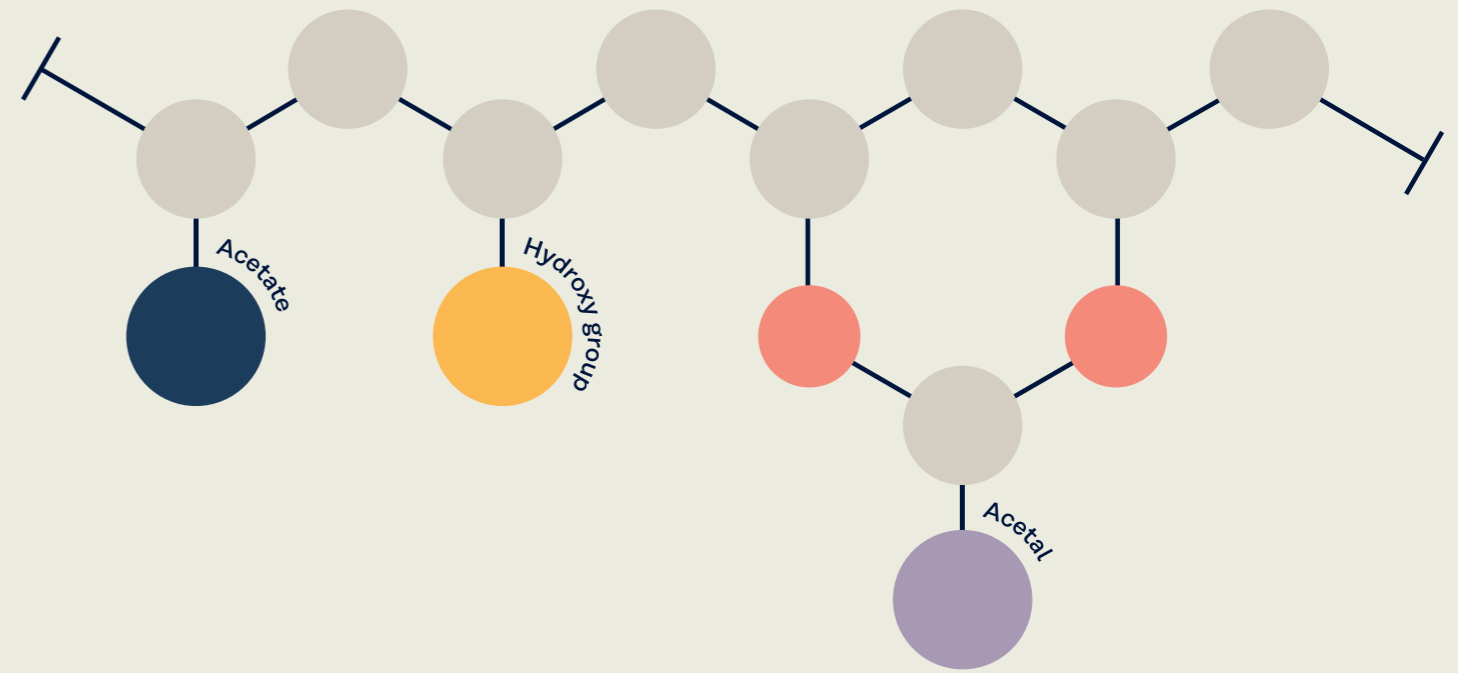
Mowital®

MOWITAL® THIN FILM – Our specialized interlayer



SPECIAL FEATURES

- Adhesive laminate films supplied on rolls
- High bonding power to glass, metals, ceramics, polymeric fabrics and polyurethane foams
- Transparent
- Thermoplastic matrix material
- Non-toxic
- Nearly unlimited shelf-life



FEATURES

Polyvinyl butyral can be used as a bonding agent for textiles, polymers and other substrates due to its stiffness in film form.

The polarity of polyvinyl butyral is responsible for its adhesion with other substrates.

One of the main reasons for the adhesion of MOWITAL® Thin Film to different materials are the free OH groups on the surface and those of the polymer.

The strongest adhesion mechanism is the bond between the functional groups in the adhesive and the atoms/molecules on the substrate surface.

MAIN APPLICATION AREAS

- Multi-layer composites/laminates
- Thermoplastic prepregs
- Glass bonding, e.g. for design applications
- Fiberglass laminates
- Laminating with metal film/sheet, e.g. steel or copper
- Bonding of various metals
- Ceramic laminates
- Bonded honeycomb sandwich structures made from different substrates
- Lightweight constructions

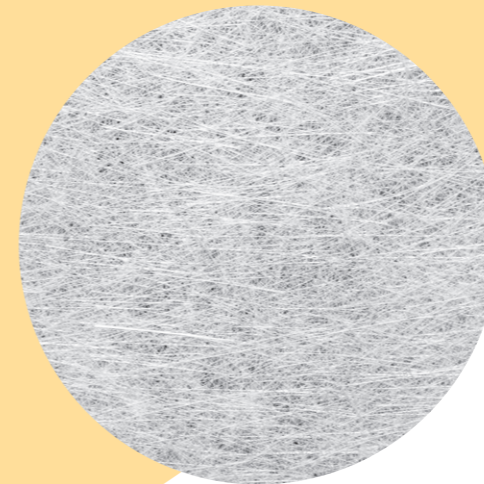
SUBSTRATES



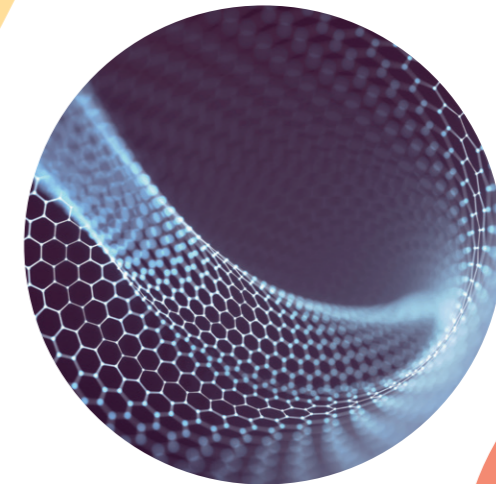
non-safety glass



metal



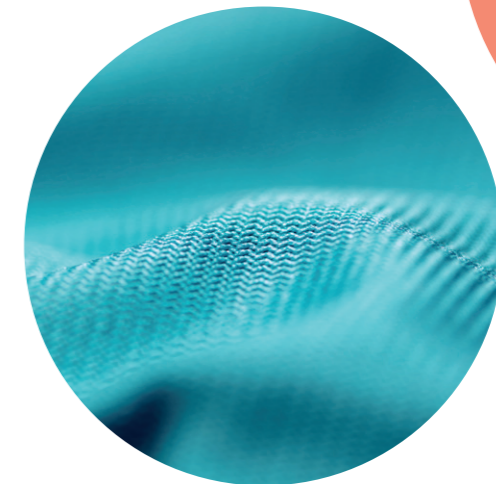
fiberglass



fabric



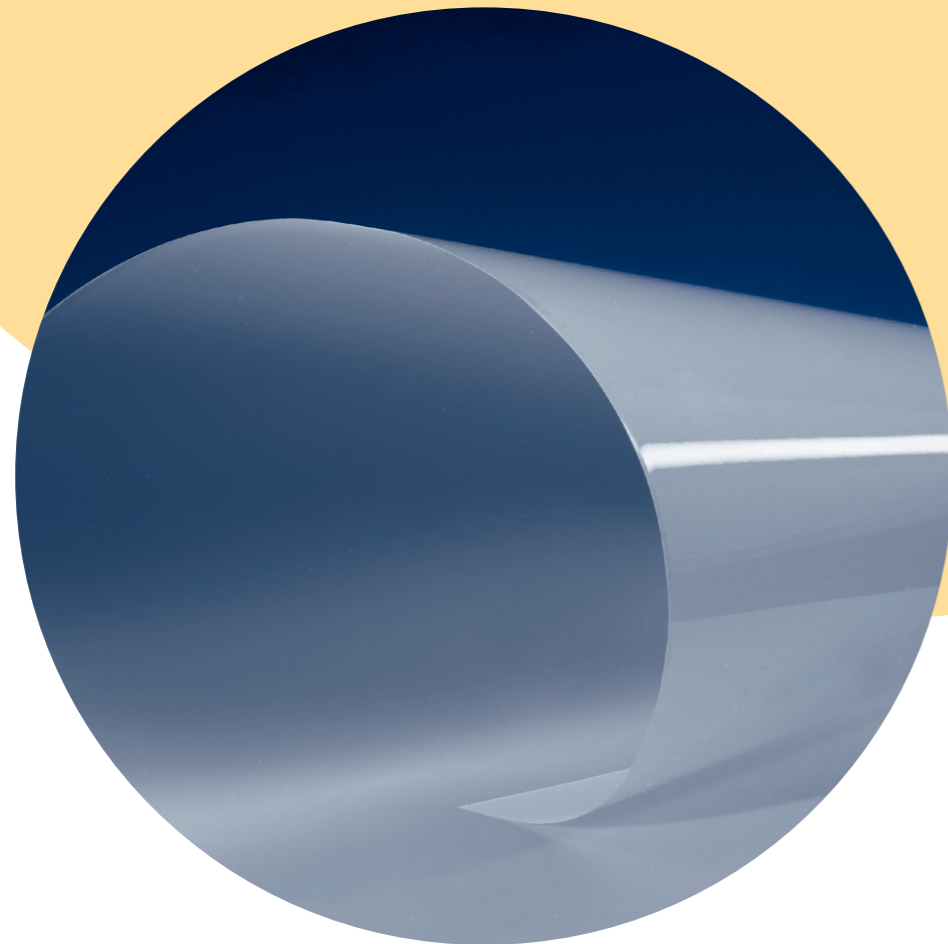
wood



textile



... and
many other
possible
substrates



MOWITAL® Thin Film

THERMAL/ THERMOMECHANICAL PROPERTIES

Properties	Unit	Condition	Standard	MOWITAL® Thin Film
Tg	[°C]	DMA, 3K/min, 1 Hz	DIN 51007	79
Shrinkage	[%]	MD, 80 °C/15 min	DIN 40634	1.1–4.4
Thermal expansion coefficient	[1/K]	[-]	ISO 11359-2	7.6E-06
Thermal conductivity	[W/m/K]	23 °C/50 °C	ASTM E 1461	0.166/0.164
Specific heat capacity	[J/g K]	23 °C/50 °C	ASTM C 351	1.4

MECHANICAL PROPERTIES

Properties	Unit	Condition	Standard	MOWITAL® Thin Film
Max tensile strength	[MPa]	23 °C/30 % rel. moisture	EN ISO 527-1	56
Elongation at maximum strength	[%]	23 °C/30 % rel. moisture	EN ISO 527-1	5
Young's modulus in vertical	[MPa]	23 °C/30 % rel. moisture	EN ISO 527-1	2,130
Young's modulus horizontal	[MPa]	23 °C/30 % rel. moisture	EN ISO 527-1	2,285

PHYSICAL PROPERTIES

Properties	Unit	Condition	Standard	MOWITAL® Thin Film
Roughness	[µm]	[-]	DIN EN ISO 21920-3:2022-12	Rz: < 1
Density	[g/cm³]	[-]	DIN EN ISO 1183-1	1.1

OPTICAL PROPERTIES

Properties	Unit	Condition	Standard	MOWITAL® Thin Film
Refractive index	[-]	Measured on a 1.00 mm film	DIN 53491	1.490
Haze	[%]	Measured in a laminate with 2 mm float glass	ASTM D1003	< 0.1
Visible transmittance	[-]	Measured in a laminate with 2 mm float glass	EN 410	89.9

MOWITAL® Thin Film Grades

Grade	Area weight ¹ [g/m²]	Net thickness ¹ [µm]	Dry content ² [%]
MOWITAL® Thin Film 050	55 ± 10 %	50 ± 10 %	> 98.5
MOWITAL® Thin Film 100	110 ± 10 %	100 ± 10 %	> 98.5
MOWITAL® Thin Film 250	275 ± 10 %	250 ± 10 %	> 98.5

1) determined as average value of 10 measurements
2) as value before packing the material

MOWITAL® Thin Film Dimensions

Grade	Width of roll [mm]	Length of roll [m]	Area per roll [m²]
MOWITAL® Thin Film 050	1,500	1,500	2,250
MOWITAL® Thin Film 100	1,500	1,000	1,500
MOWITAL® Thin Film 250	1,500	300	450



Kuraray Europe GmbH
Philipp-Reis-Str. 4
65795 Hattersheim am Main
Germany

marketing-pvb@kuraray.com
[➔ www.mowital.com](https://www.mowital.com)

© Kuraray. 2023. All rights reserved.

Mowital is a registered trademark of Kuraray Europe GmbH. Trademarks may not be applied for or registered in all countries. The information, recommendations and details given in this document have been compiled with care and to our best knowledge and belief. They do not entail an assurance of properties above and beyond the product specification. The user of our products is responsible for ensuring that the product is suitable for the intended use and conforms to all relevant regulations. Kuraray Co., Ltd. and its affiliates do not accept any guarantee or liability for any errors, inaccuracies or omissions in this document.

kuraray

Mowital®