RENOLIT

Rely on it.

RENOLIT ALKORCELL

Product- and Processing Information

Get the most out of the wide-ranging possibilities from **RENOLIT** ALKORCELL.

RENOLIT ALKORCELL - SURFACE COATING FOR FURNITURE AND INTERIOR DESIGN

RENOLIT ALKORCELL – GENERAL DESCRIPTION

RENOLIT ALKORCELL is a decorative film based on polypropylene (PP). Its surface is protected against abrasion and scratches by a transparent thermosetting varnish. The reverse side of **RENOLIT** ALKORCELL is coated with a primer for easy application. The standard thickness varies between 0.10 mm and 0.20 mm, depending on application and design.

RENOLIT ALKORCELL was developed around 40 years ago with the aim of combining various advantages. The result was a new, revolutionary material:

- Resistant to water, damp and mould
- Flexible
- Free of formaldehydes and heavy metals
- Provides a barrier effect against formaldehyde

RENOLIT ALKORCELL is a green product through and through with impressive physical properties, which can be easily processed on conventional machines of the wood processing industry.
A surface coating material must not only be able to be produced efficiently, but it must also be adaptable to meet customers specific aesthetic requirements. When considering the suitability of a product, properties such as print design, colour, texture and finish must all be considered.

RENOLIT ALKORCELL

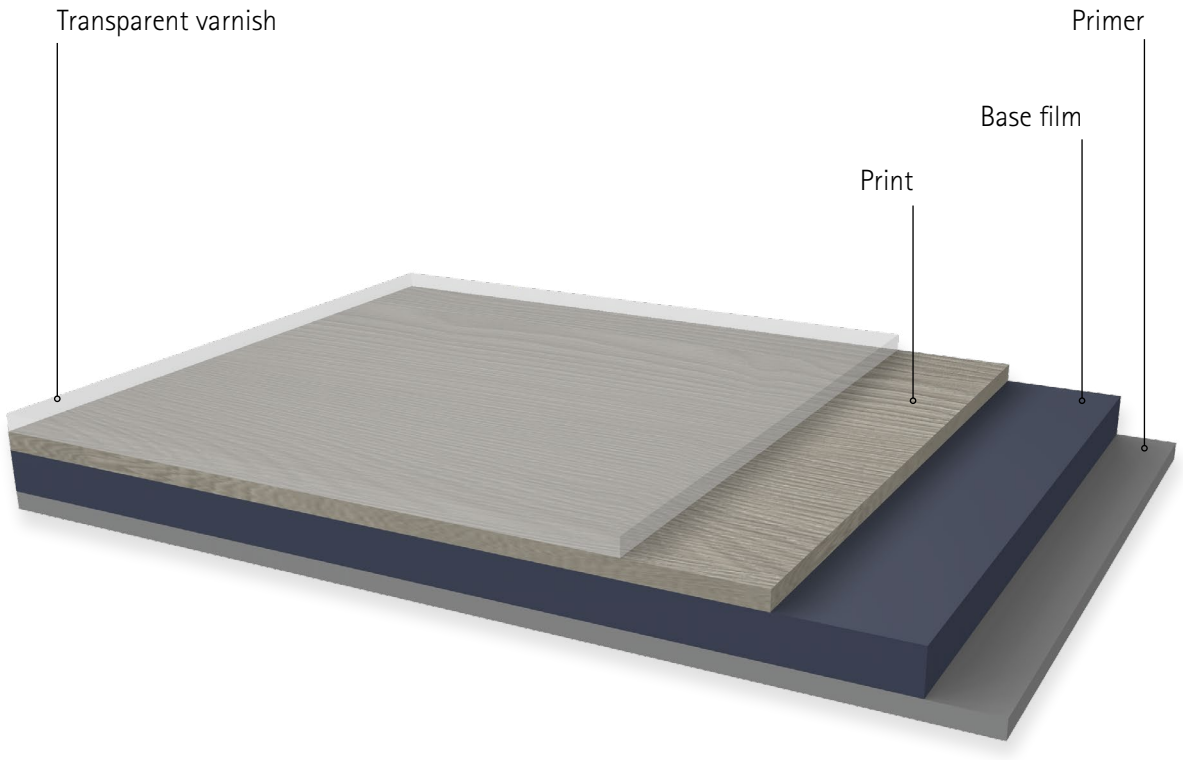
- High-quality design
- Simple and wide-ranging applications
- Environmentally friendly
- Barrier function
- Mould resistance

PP–Film
RENOLIT ALKORCELL is a decorative thermolaminate based on PP. It is aesthetically defined via embossing and printing. This is what makes **RENOLIT** ALKORCELL uniquely different from paper or CPL, for example.

Product structure
RENOLIT ALKORCELL has a single-layer structure. The surface is protected against abrasion, scratches and chemical influences by a transparent varnish. The back side is coated with a primer.

Thickness
The standard thickness of **RENOLIT** ALKORCELL varies between 0.10 mm and 0.20 mm depending on application and design.

RENOLIT ALKORCELL – PRODUCT DESIGN AND PROPERTIES

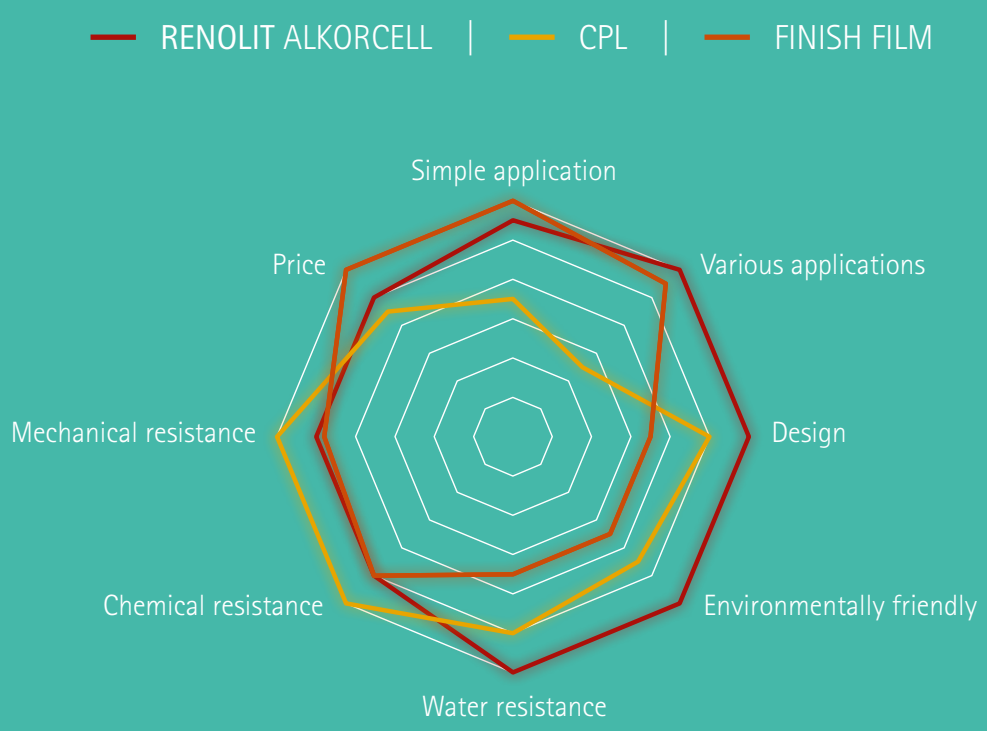


PROPERTIES

RENOLIT ALKORCELL acts as a barrier against damp and formaldehyde. The thermolaminate meets the requirements for high quality interior furniture surfaces in terms of:

- Scratch resistance
- Abrasion resistance
- Chemical resistance
- Water resistance
- Damp resistance
- Mould resistance
- Lightfastness
- Easy cleaning

COMPARISON WITH CPL AND FINISH FILM



ENVIRONMENT

RENOLIT ALKORCELL has several features that are environmentally beneficial:

- Free of formaldehydes
- Free of halogens
- Free of plasticisers

The product also has other positive ecological properties:

- Uses harmless pigments
- Low-emission disposal by incineration possible

The formulation and manufacture of **RENOLIT** ALKORCELL films complies strictly with REACH regulations.

RENOLIT ALKORCELL PRODUCT OVERVIEW

RENOLIT ALKORCELL – Product portfolio			Developments
RENOLIT ALKORCELL Standard	RENOLIT ALKORCELL Phono		RENOLIT ALKORCELL Anti-Slip
RENOLIT ALKORCELL Stereoprint	RENOLIT ALKORCELL Master Emboss		RENOLIT ALKORCELL Anti-bac
RENOLIT ALKORCELL Ecofilm	RENOLIT ALKORCELL SuperMatt		RENOLIT ALKORCELL ILS
RENOLIT ALKORCELL Nature	RENOLIT ALKORCELL ISR		RENOLIT ALKORCELL IFR
RENOLIT ALKORCELL Master Emboss Synchro	RENOLIT ALKORCELL Surrounding		

All products are available as customised solutions - on request

DELIVERY OPTIONS

Stock range:	
Standard width:	1,260 mm, 1,300 mm, 1,400 mm
Standard thickness:	120 microns
Standard roll length:	600 m
Minimum order quantity for stock items:	1 pallet = 4 rolls

MTO:	
Width:	(Product-dependent)
Thickness:	100 – 200 microns
MTO:	5,000 m first delivery / 10,000 m follow-up order

DESIGN FEATURES

RENOLIT ALKORCELL – Stereoprint

The thermoformability of **RENOLIT** ALKORCELL after calendering gives excellent surface properties. The range of emboss options extends from „synthetic" effects to wood structures. Recent developments in printing technology have resulted in designs that increasingly resemble their natural counterparts. Our specialist print and embossing technique is a particular technical innovation, in which the emboss structure and the printed design are perfectly matched - wood pores and grain are synchronised.

RENOLIT ALKORCELL – MasterEmboss

With MasterEmboss from **RENOLIT** ALKORCELL, the saying „You get what you see" applies to furniture surfaces. MasterEmboss makes visually rough surfaces feel pleasant to the touch by perfectly combining outstanding print quality and deeply engraved emboss.

MasterEmboss – the process
A realistic wood surface is achieved by re-embossing the foil or embossing it in the final operation.

MasterEmboss Synchro
This version is characterized by a perfect interplay of decorative print image and emboss. Here, embossing is synchronised with the print design. The result is a very natural looking decor with matching deep emboss.

APPLICATIONS

NEW APPLICATIONS FOR **RENOLIT** ALKORCELL

FIVE-PIECE DOOR (DIFFERENT TYPES)

The 5-piece mitred door has been established for hundreds of years. **RENOLIT** ALKORCELL offers an ideal combination of natural woodgrain finishes, moderate prices and a simple yet versatile solution for this door style. The frame profiles are wrapped 360°; the inlay can be flat or raised.

Another door style, in addition to the mitre door that is popular especially in North America and Great Britain, is the shaker style door. The main difference is the construction of the frame joints, which is 45° for a mitered door and 90° for the shaker style.

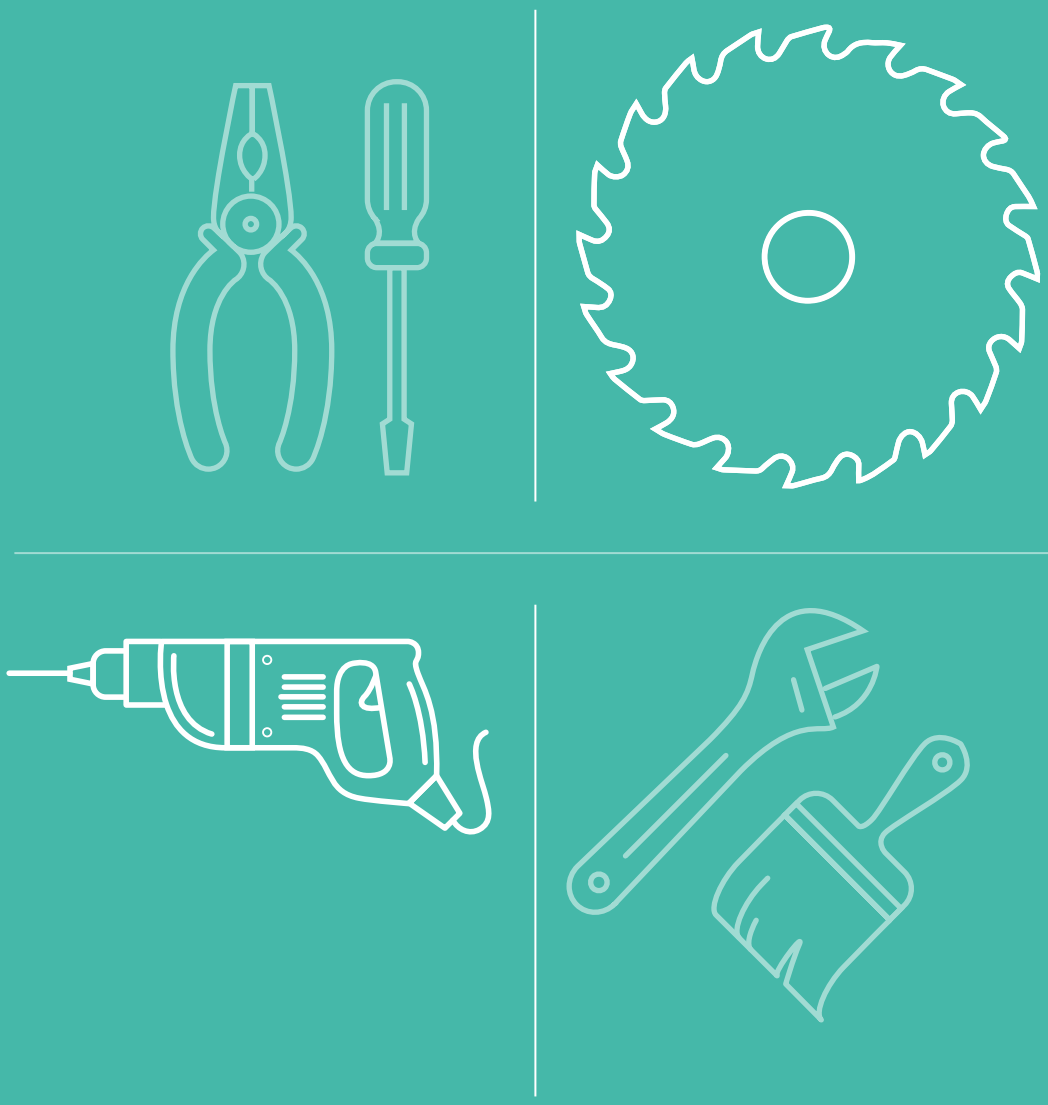
Mitred door

ONE AND TWO DIMENSIONAL APPLICATION OF **RENOLIT** ALKORCELL

RENOLIT ALKORCELL is also perfectly suited for one and two dimensional applications where the surface and both edges of a post formed profile are wrapped in a single operation without joints.

Shaker door

PROCESSING INFORMATION



FLAT LAMINATION

Machine parameters

	Cold lamination	Thermal lamination
Production speed:	10 – 20 m/min	15 – 30 m/min
Temperature:	20 °C	80 °C – 120 °C
Adhesive application:	Roller	Roller

Adhesives

	PVAc EVA UV + curing agent	PVAc EVA UV + curing agent
Quality:	60 – 80 g/m² wet	40 – 60 g/m² wet
Bond strength after:	0.5 – 1 h with UF 3 – 5 h with PVAc	---

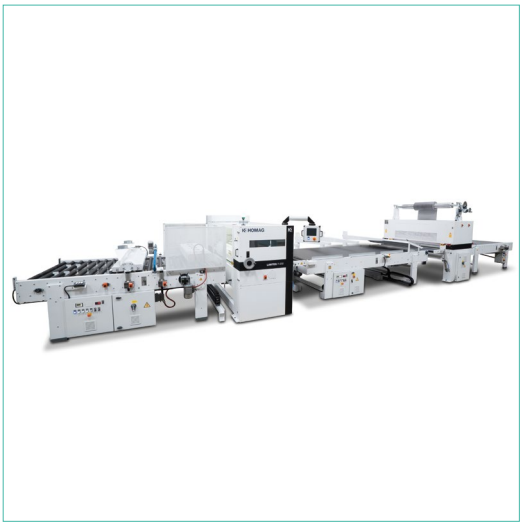
TECHNIQUES

Two lamination techniques are possible for thermoplastic laminates: cold lamination and (semi-)thermal lamination.

- **Cold lamination**
  Lamination process with temperatures around 20 °C (without heating).

- **Thermal lamination**
  PVC films reach the thermoplastic stage at temperatures of 40-60 °C, whereas for **RENOLIT** ALKORCELL (PP) this only begins at around 120 °C (see Vicat curve). This difference allows **RENOLIT** ALKORCELL to be processed at temperatures of 80-120 °C.

  In contrast to cold lamination, hot roller lamination achieves a high bond strength during processing, even while the machine is running. Cutting to part size is immediately possible.

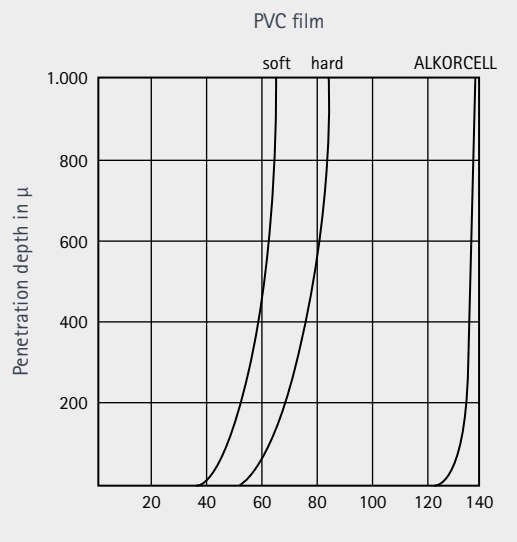


Roll laminating machine by HOMAG.

FLAT LAMINATION

VICAT CURVE THERMOPLASTICS

While PVC films reach the thermoplastic phase at temperatures of 40 - 60 °C, the thermoplasticity of **RENOLIT** ALKORCELL (PP) begins only at approx. 120 °C (see the Vicat curve). This difference allows **RENOLIT** ALKORCELL to be processed at temperatures of 80 – 120 °C. In contrast to cold laminating, the hot roll laminating system achieves a high adhesive bond strength during the machine cycle; a separation cut on partial widths can generally be made immediately.



Vicat Curve

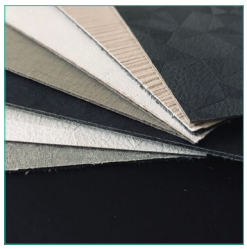
ELONGATION:

A maximum elongation of 2% should not be exceeded in order to avoid the memory-effect. When laminating, make sure that the web tension is low. The same applies to profile wrapping.

FLAT LAMINATION – SUBSTRATE

RENOLIT GORCELL

MDF, HDF, particle boards



WPC boards: e.g. **RENOLIT** WOOD-STOCK

Dry wall

Other possible applications:

- Bubble boards
- Expanded PVC foam
- and many other surfaces

PROFILE WRAPPING

AGGREGATES:

MORE INFORMATION?

RENOLIT
ALKORCELL

DID WE SPARK YOUR INTEREST IN RENOLIT ALKORCELL?

For further information and to obtain the complete **RENOLIT** ALKORCELL Processing brochure, please contact us at **interiorsurfaces@renolit.com**

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