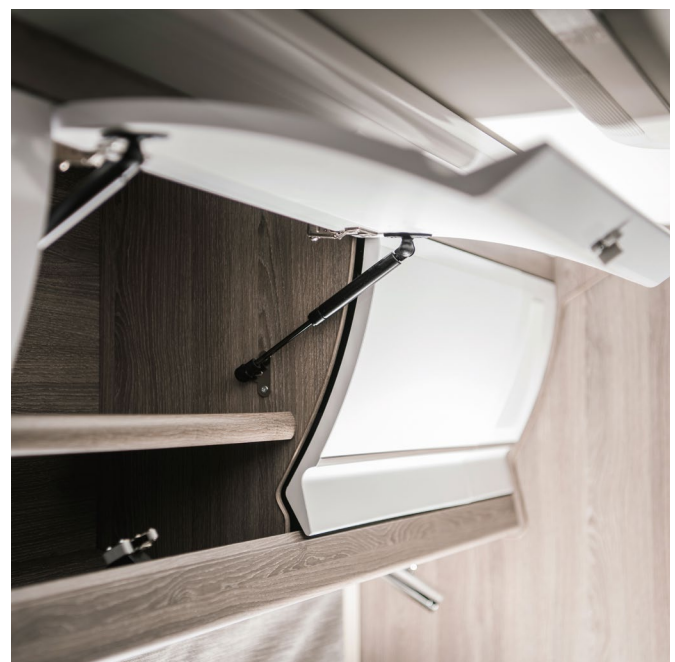




*Rely on it.*

## RENOLIT GORCELL – Advanced composite material Processing handbook for innovative panel products

Explore the  
versatility  
of RENOLIT  
GORCELL.



# CONTENT

RENOLIT GORCELL	3
RENOLIT GORCELL TYPES AND APPLICATION	4
RENOLIT WOOD-STOCK, RENOLIT CORK-STOCK, RENOLIT TECNOGOR	5
STORAGE	14
FABRICATION	16
FAQ	69
PARTNER FIRMS	71
SERVICE	74

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## RENOLIT – YOUR RELIABLE PARTNER IN THE INDUSTRY

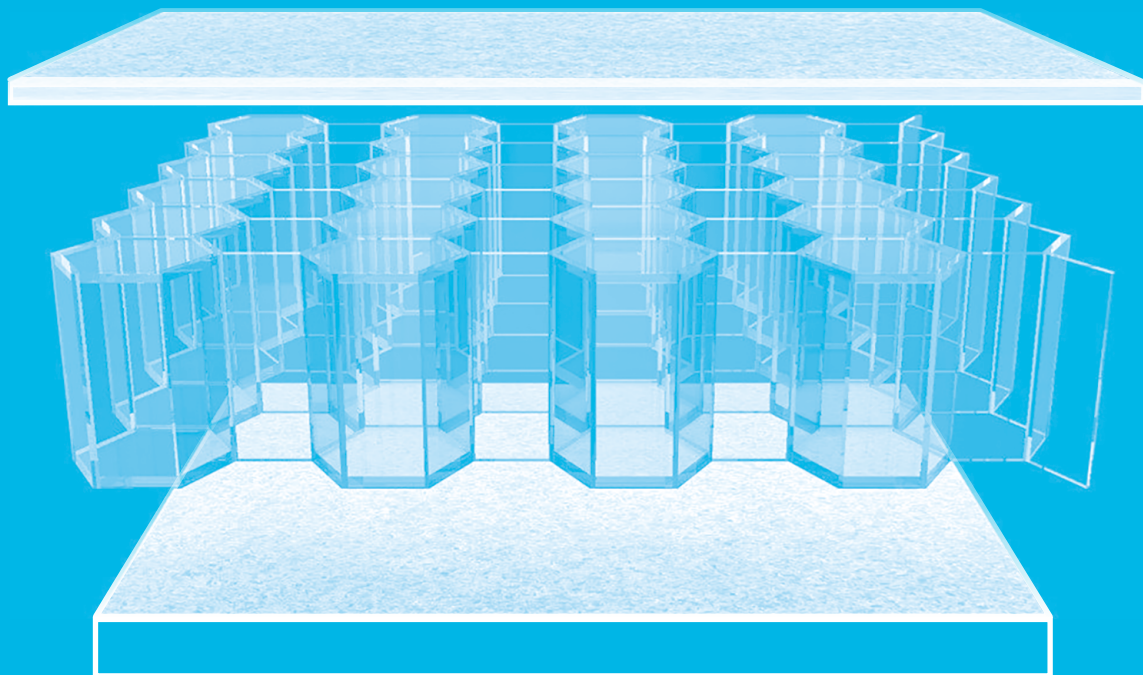
The RENOLIT Group is one of the leading manufacturers internationally of high-quality plastic films and related products for technical applications. For over 70 years, this independent family business has set new standards in quality and innovation, and today employs around 4,800 people at more than 30 production sites and distribution companies. The name RENOLIT stands for technical competency, modern product design and partnership-based services throughout the world.

RENOLIT plastic films are used to refine the surfaces of furniture, construction elements and hi-fi products, to insulate roof and underground structures and to line swimming pools. We produce films and tubes for medical applications and recyclable panels in combination with natural fibres for the building and automotive industries. RENOLIT films are also used to make products for office furniture and industries, self-adhesive products for the graphics and labelling industry, as well as technical products.

# RENOLIT GORCELL

Advanced composite material  
General data

RENOLIT GORCELL .....	3
RENOLIT GORCELL – the material and its characteristics .....	5
RENOLIT GORCELL availability .....	11
General data .....	13
Application Examples	
■ Caravan, yacht, furniture and panels .....	8
■ Outdoor furniture .....	10
■ Furniture components and doors for wet rooms .....	10



# RENOLIT GORCELL SYSTEM

## Formed or flat furniture components – one material for multiple applications

RENOLIT GORCELL is composed of a variety of materials that facilitate the production of extremely lightweight, waterproof and rot-resistant furniture components.

Complex components consisting of flat surfaces and two-dimensional constructions are particularly common in caravan and yacht manufacturing. RENOLIT GORCELL is an ideal solution for matching elements, in that it provides a seamless presentation of the design throughout the interior.

## RENOLIT GORCELL Panels

RENOLIT GORCELL panels for lightweight furniture manufacturing consist of a RENOLIT WOOD-STOCK top layer. These panels are available either with surfaces from the wide range of RENOLIT ALKORCELL décors or with coverings that optimise subsequent adhesion or coating. Using processing conditions appropriate for the product construction, you can create modern, durable, yet lightweight furniture components.

## RENOLIT GORCELL panels for formed furniture elements

Two-dimensional furniture elements, such as cabinet doors or shower cubicle walls are usually produced on vacuum presses using materials constructed from various surface and core layers.

RENOLIT CORK-STOCK provides a variety of surface layers for these types of applications. These layers can be pressed with RENOLIT GORCELL core elements to produce two-dimensional components, usually in combination with anhydrous reactive bonding systems such as PUR adhesives.

A key advantage of this system is its homogenous and fully recyclable material usage that is in keeping with the demands of the circular economy of today.



*RENOLIT GORCELL is used in a wide range of applications, such as the interior design of motor homes.*

# RENOLIT GORCELL – THE MATERIAL AND ITS CHARACTERISTICS

RENOLIT GORCELL offers you a particularly light panel material with numerous advantages. This lightweight construction material is made by combining RENOLIT WOOD-STOCK composite panels with an ultra-light honeycomb structure.

The honeycomb structure of this high-tech product can withstand great pressure and is also watertight. It is manufactured from thermoplastic foil in a continuous production process, and then combined with top layers of composite panels. Both the EconCore procedure and the end product have to date been unique in Europe in this form. When covered with a RENOLIT WOOD-STOCK top panel, RENOLIT GORCELL has a multitude of possible applications, both interior and exterior, and offers completely new opportunities for the design of components.

## RENOLIT GORCELL surface layer

### RENOLIT WOOD-STOCK

RENOLIT WOOD-STOCK consists of a thermoplastic WPC (Wood Polymer Composite) – a combination of wood fibres and polymers that are compressed under heat and pressure. The 1.0 mm to 3.0 mm thick board materials can be three-dimensionally shaped after heating and are extremely dimensionally stable despite their low wall thickness.

### RENOLIT CORK-STOCK

RENOLIT CORK-STOCK consists of a thermoplastic CPC (Cork Polymer Composite) – a combination of cork fibres and polymers that are compressed under heat and pressure. The 1.0 mm to 3.0 mm thick panel materials are particularly suitable for the production of formed elements in the lightweight furniture sector or in decorative side wall paneling for caravans.

### RENOLIT TECNOGOR

RENOLIT TECNOGOR consists of a thermoplastic GRP (Glass Reinforced Plastic) composition – a combination of short glass fibres and polymers that are compressed under heat and pressure. The 0.8 mm to 3.0 mm thick panel materials can be three-dimensionally shaped after heating and are extremely dimensionally stable despite their low wall thickness.

# RENOLIT GORCELL – THE MATERIAL AND ITS CHARACTERISTICS

The surface of the composite material can either be coated with RENOLIT ALKORCELL PP decorative foils for indoor or outdoor use, with a decorative or functional fleece material and is also available as a recoatable panel for subsequent coating or lamination.

In addition, RENOLIT WOOD-STOCK, RENOLIT CORK-STOCK and RENOLIT TECNOGOR are almost hydrophobic,

waterproof and rot-proof. Full recyclability of the various top layers makes for a preferred choice of material for a closed cycle economy.

Decorative surface layers can be chosen from the over 400 colours and décors in the RENOLIT 2D and 3D product range.

## RENOLIT GORCELL – characteristics

### Particularly light

The core of the honeycomb has a specific weight of only 80 kg/m<sup>3</sup>. This light weight means that RENOLIT GORCELL panels are easy to handle.

### High weather-resistance

Thanks to its excellent water-resistance, the material offers high weather-resistance for external use and for humid indoor locations.

### Enormously strong

With compressive strength of up to 1.2 MPa (ASTM C365-57), RENOLIT GORCELL panels have extremely high load-bearing capacity. Although the sandwich structure is only a few millimetres thick, its internal honeycomb structure ensures unusually high strength.

### Excellent to work with

With RENOLIT GORCELL, even curved shapes can be simply achieved with a visually attractive appearance. Surfaces can be simply achieved in most materials without any problem.

### Versatile to use

In combination with coverings such as non-woven materials, various types of textile or decorative RENOLIT film, RENOLIT GORCELL can be used in many different ways. The external coating can be realised as a scratch-proof or weather-resistant finish, or a "soft-touch" surface.

### Fully recyclable

RENOLIT GORCELL can be 100 % recycled. The whole sandwich structure is recyclable. RENOLIT also takes back all process waste produced, and returns it to production.

### Wide selection

RENOLIT has various different thicknesses and surface layers of RENOLIT GORCELL available in its range, so that it is always possible to offer the technically and commercially optimum solution.

### Cost-efficient

The sparing use of resources in the manufacture of RENOLIT GORCELL ensures sustainable cost savings.

# RENOLIT GORCELL – THE MATERIAL AND ITS CHARACTERISTICS

## Wide range of applications for interior and external use

Thanks to its numerous performance advantages, RENOLIT GORCELL offers new opportunities for numerous areas of application - from the transport industry, through furniture to the leisure sector.

### Example 1: Motor homes and caravans

RENOLIT sets new standards in the demanding motor home and caravan market with its innovative lightweight material. RENOLIT GORCELL can be used in caravan interiors for wall panelling, sliding doors, furniture fronts, side walls in wet rooms and flooring. Interior caravan panelling made from RENOLIT GORCELL can be as much as 50% lighter than that using conventional plywood based furnishings. The material can withstand high pressure and impact, and is also resistant to water and moisture, therefore ideal for caravan attachments such as flaps and doors. RENOLIT GORCELL can be coated with various surface materials, meaning that caravan ceilings, walls, flooring and furniture fronts can be co-ordinated with the same design, giving a seamless appearance to interiors.

RENOLIT WOOD-STOCK, RENOLIT CORK-STOCK for interiors and RENOLIT TECNOGOR exteriors are available for wall and floor construction.



RENOLIT GORCELL is particularly suitable for interior use in motor homes and caravans.



Example of motor home or caravan interior

# APPLICATION EXAMPLE CARAVAN AND MOTOR HOMES

Two dimensionally formed components comprising of RENOLIT CORK-STOCK, and RENOLIT WOOD-STOCK, RENOLIT TECNOGOR with RENOLIT GORCELL core materials for caravan interior furniture and partition walls.

Caravan interior wall using RENOLIT CORK-STOCK and RENOLIT WOOD-STOCK, RENOLIT TECNOGOR with RENOLIT ALKORCELL with an solid colour emboss.

Furniture elements, shower partitions and doors manufactured using RENOLIT GORCELL with RENOLIT ALKORCELL surface designs in plain colours or print designs.







Two dimensionally formed components comprising of RENOLIT CORK-STOCK, and RENOLIT WOOD-STOCK, RENOLIT TECNOGOR with RENOLIT GORCELL core materials for caravan interior furniture and partition walls.

Floor panels made in a combination of RENOLIT WOOD-STOCK or RENOLIT TECNOGOR with RENOLIT GORCELL core materials laminated with RENOLIT Flooring Components.

Caravan outer wall made of RENOLIT TECNOGOR with RENOLIT ALKORCELL Surrounding in plain colours or print designs.

## FURTHER APPLICATION EXAMPLES

### Example 2: Outdoor use around the home and garden

RENOLIT GORCELL is extremely versatile when it comes to outdoor applications, for example in summer houses, privacy screens for boundaries and waste bin areas or for outdoor furniture and storage boxes.

The material is visually appealing, easy to process and extremely durable. Unlike wood, the material does not require regular repainting, yet is highly weather resistant in outdoor use. Its lightweight construction makes light work of component assembly as well as incurring reduced freight costs.



*Furniture bodies, doors and drawers made from RENOLIT GORCELL with RENOLIT ALKORCELL Surrounding in solid colours and print designs.*

---

### Example 3: Furniture components and doors for wet rooms

RENOLIT GORCELL provides the ideal materials for challenges such as extreme humidity, cleaning water and condensation.

Wet room doors and sandwich panels made from RENOLIT GORCELL can also withstand extreme use of water and moisture. Waterproof and rot-resistant furniture components, including shaped parts, can be used in certain regions whose climatic conditions make wood-based materials an inappropriate choice, where extremes of temperature and humidity would often lead to mould growth and a heightened risk of warping.

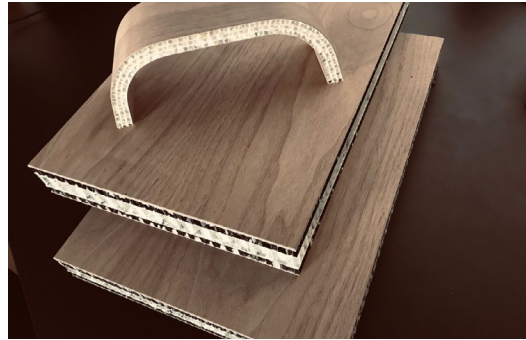


*Sandwich panels for wet room applications made from a combination of RENOLIT CORK-STOCK, RENOLIT WOOD-STOCK or RENOLIT TECNOGOR with RENOLIT GORCELL core materials.*

## AVAILABILITY OF RENOLIT GORCELL



Application example shower caravan.



Sandwich molded panels from RENOLIT GORCELL.

## AVAILABILITY OF RENOLIT GORCELL

- **Availability:**
  - Per part/component
  - Only RENOLIT GORCELL
  - RENOLIT GORCELL with non-woven material
  - RENOLIT GORCELL with decorative surfaceCore option:
  - RENOLIT GORCELL with non-woven
  - RENOLIT GORCELL WOOD-STOCK with non-woven
- **Panel dimensions:**
  - Standard panels 1220 mm × 2440 mm
  - (Maximum size 1500 mm × 6000 mm)
- **Sending samples:**
  - Samples can be requested from [interiorcollection.renolit.com](http://interiorcollection.renolit.com)

RENOLIT GORCELL panels are made in accordance with your particular requirements and specifications. Decorative films from the RENOLIT ALKORCELL range refine the surface and give the product a good finish.

## STOCK PROGRAM LIGHTWEIGHT PRODUCTS

### RENOLIT GORCELL WOOD-STOCK ALKORCELL

The waterproof lightweight panel for the precise construction of furniture and caravan components.

Panel format:	1.220 x 2.440 mm
---------------	------------------



Design: TWEEDY OAK GREY

- 12 mm | S40.79.31.0001.000
- 15 mm | S40.79.31.0002.000
- 21 mm | S40.79.31.0003.000



Design: GLADSTONE OAK CAPPUCCINO

- 12 mm | S40.79.31.0004.000
- 15 mm | S40.79.31.0005.000
- 21 mm | S40.79.31.0006.000

Laminatable

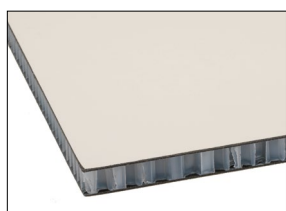
### RENOLIT GORCELL WOOD-STOCK FLEECE



Design: FLEECE

- 15 mm | S40.79.40.0001.000
- 21 mm | S40.79.40.0002.000

### RENOLIT GORCELL WOOD-STOCK ALKORCELL Recoatable



Design: BEIGE RECOATABLE / KASCHIERBAR

- 12 mm | S40.79.33.0003.000
- 15 mm | S40.79.33.0001.000
- 21 mm | S40.79.33.0002.000

### RENOLIT CORK-STOCK ALKORCELL

The surface layer system for moulded components in furniture construction and caravan applications.

Layer format:	1.220 x 2.440 mm
---------------	------------------



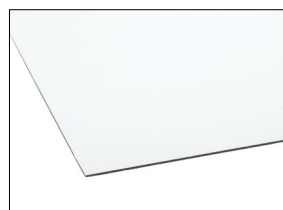
Design: TWEEDY OAK GREY

- 1,3 mm | S40.71.84.0001.000



Design: GLADSTONE OAK CAPPUCCINO

- 1,3 mm | S40.71.84.0002.000



Design: COCHA WHITE 87

- 1,3 mm | S40.71.83.0001.000



Design: BEIGE RECOATABLE / KASCHIERBAR

- 1,3 mm | S40.71.88.0001.000

### RENOLIT GORCELL PP-FLEECE

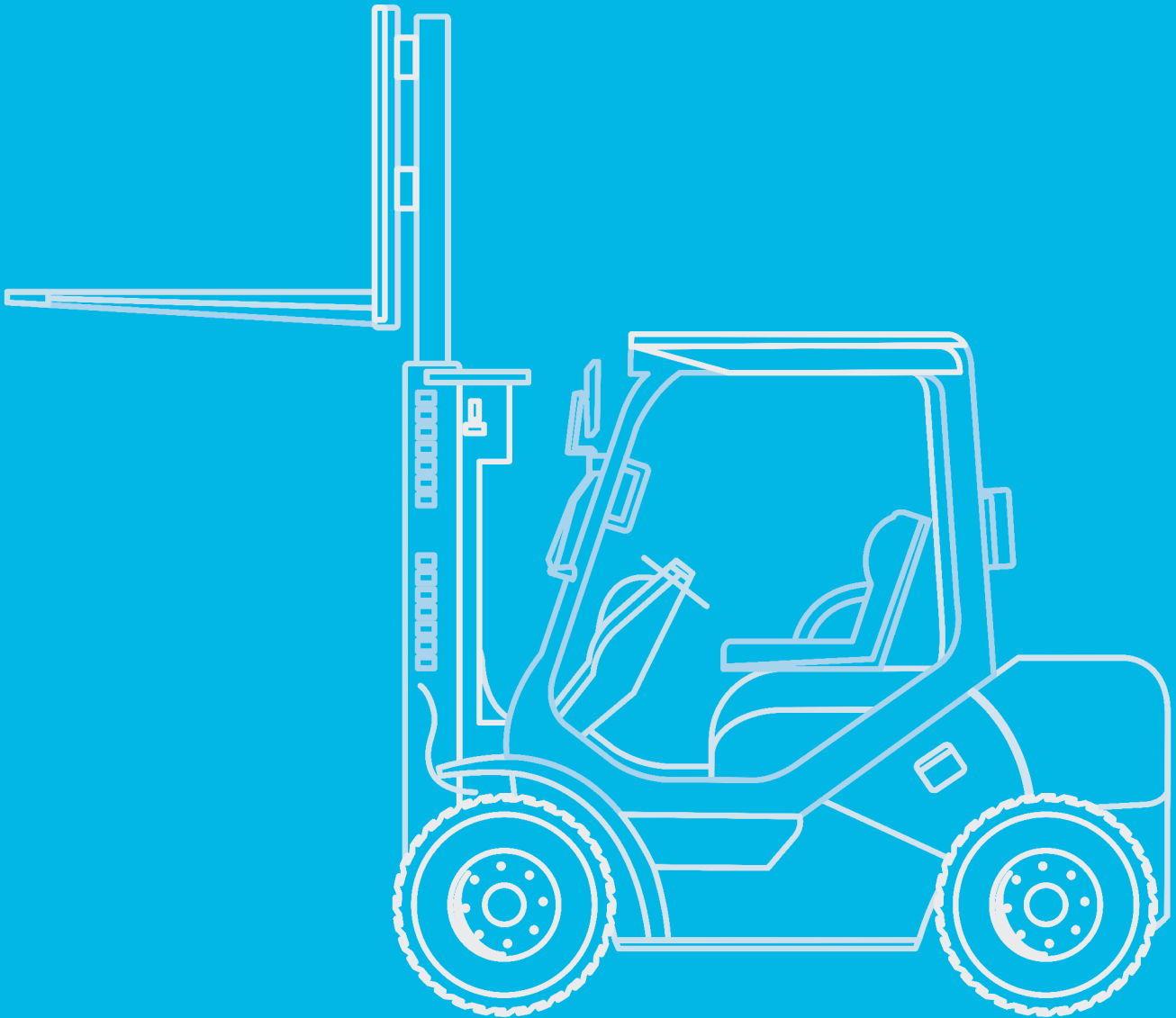


Design: HONEYCOMB CORE

- 3,5 mm | S40.79.60.0001.000
- 4,6 mm | S40.79.60.0002.000
- 8,8 mm | S40.79.60.0003.000
- 9,8 mm | S40.79.60.0004.000

# STORAGE

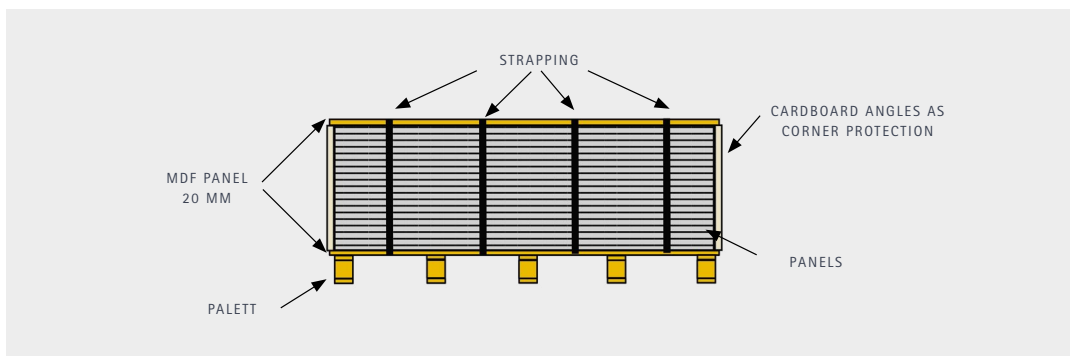
Storage of RENOLIT GORCELL panels



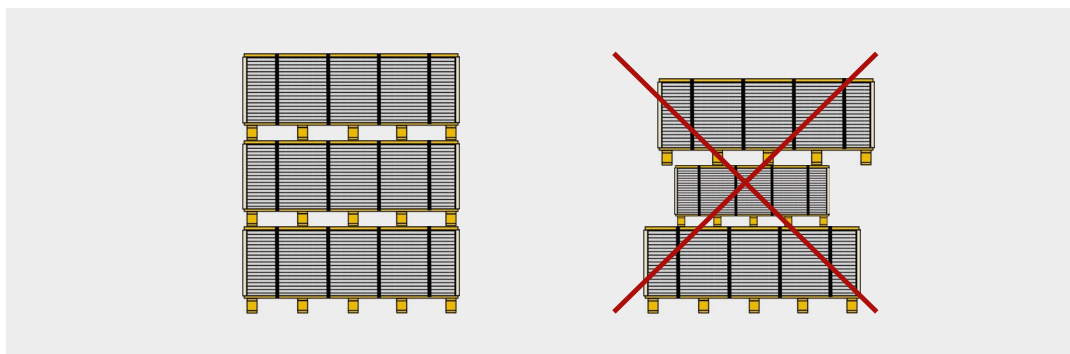
The RENOLIT GORCELL panels are delivered on wooden pallets with flat bases. Depending on the type of panel, a stack is also covered with a chipboard covering panel. The panels are packed in film as standard, and strapped down several times. The stacks of RENOLIT GORCELL should be stored in temperature-controlled rooms and protected from humidity. If several stacks are stored on top of one another, care must be taken to ensure that the load can be transferred vertically through the pallet uprights. Incorrect storage may lead to undesirable warping of the panels.



*Packed RENOLIT GORCELL panel stack*



*Packed stack of panels on pallet*

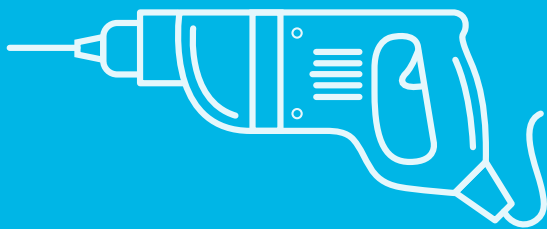
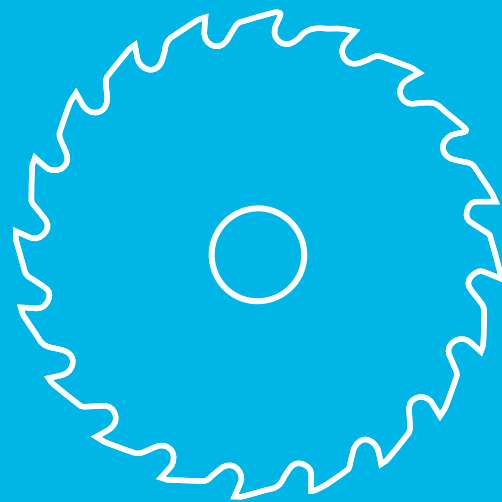
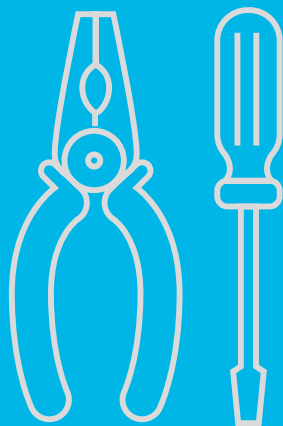


*Storage of RENOLIT GORCELL panels*

Storage is possible in a temperature range from  $-30^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$ . Usually normal ambient temperatures are aimed for.

# FABRICATION

Process and treat RENOLIT GORCELL panels in the best way possible

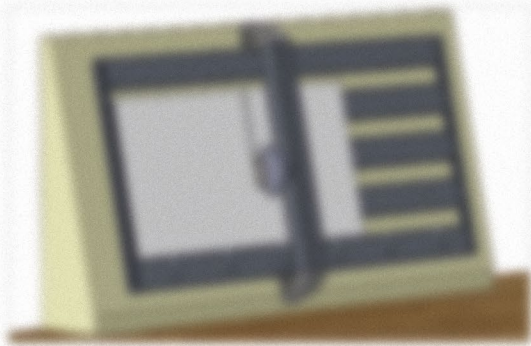


Fabrication .....	16
Cutting .....	18
Saw blades .....	20
Dust removal and extraction .....	21
Polishing RENOLIT GORCELL panels .....	22
Laminating film on RENOLIT GORCELL panel .....	23
Veneering and bonding HPL on the RENOLIT GORCELL panel .....	24
Bonding and doubling surfaces of RENOLIT GORCELL panels .....	25
Large format sandwich panels .....	26
Carcass bonding RENOLIT GORCELL panels .....	28
Process of bonding RENOLIT GORCELL panels .....	29
Edge gluing machine and joint cutter .....	30
Application of adhesive with roller unit .....	31
Edge banding with reactivation technology .....	32
Comparison of edging systems .....	33
Edge sealing of inner cut-outs .....	34
Alternative edging solutions .....	36
Drilling RENOLIT GORCELL panels .....	37
Panel joins and fixing points .....	38
Procedure for insert bonding, eg Hettinject by Hettich .....	38
Procedure with EJOT friction welded joint and equipment from WEBER automatic screwdrivers .....	39
Cold-melt connection process .....	40
Manual production of fixing points in RENOLIT GORCELL honeycomb panels .....	42
Fixing point with KVT pop rivets .....	43
Joints with inlays, RENOLIT GORCELL insert strips for glued panels .....	44
Screw joints and folds .....	46
Folding and thermally expanding RENOLIT GORCELL panels .....	46
Butt welding .....	48
Examples of construction and joints .....	49
Corner of carcass with invisible joint .....	49
Gluing a corner joint .....	49
Fastening with bonded bolt .....	49
Fastening with horizontal bondet bolt .....	50
Carcass corner visible .....	50
Corner constructions with elongated fixings .....	52
Horizontal parts .....	53
Shelves .....	54
Hinges .....	55
Back wall connector .....	56
Clothes rack support / wardrobe rail support .....	56
Drawers .....	57
Handles .....	58
Cabinet suspension brackets .....	58
Corner construction with partial tongue and groove .....	60
Production of formed furniture components .....	62
Production of pressing moulds .....	63
Preparation of top layers .....	64
Pressing of formed elements .....	65
Automatic front edge banding machine from Koch Technology .....	67

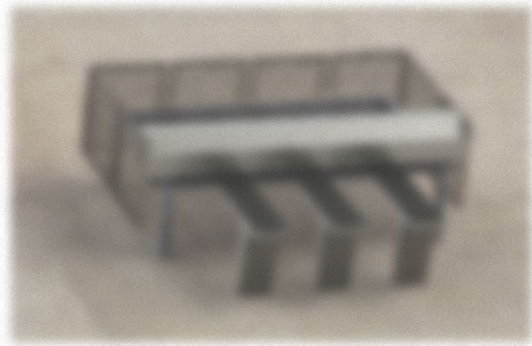


## CUTTING

**MINI CUT 3000/3500 - 3000/3500 can be used for  
cutting of vertical mould walls.**



MINI CUT 3000/3500



MINI CUT 3000/3500

### **Reduce roller shaft pressure**

When cutting with an horizontal gear saw, the roller pressure must be reduced, depending on the type of material. This is done by turning the roller pressure adjustment screw clockwise.

The pressure limit of a gear saw can differ up to 50% from the usual 100-120 kg. The user manual provides the maximum pressure for MINI CUT 3000/3500.



MINI CUT 3000/3500

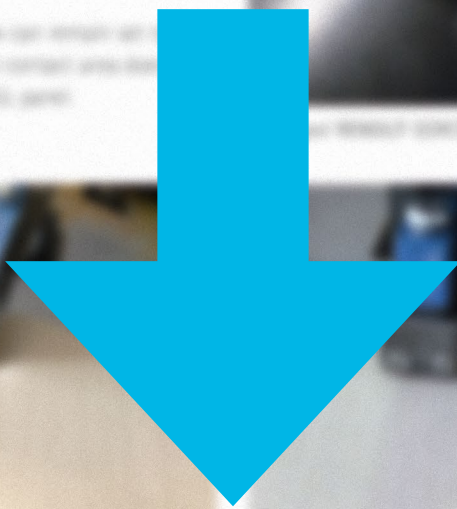


MINI CUT 3000/3500



MINI CUT 3000/3500

# MORE INFORMATION?



RENOLIT  
GORCELL

# 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](mailto:interiorsurfaces@renolit.com)

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