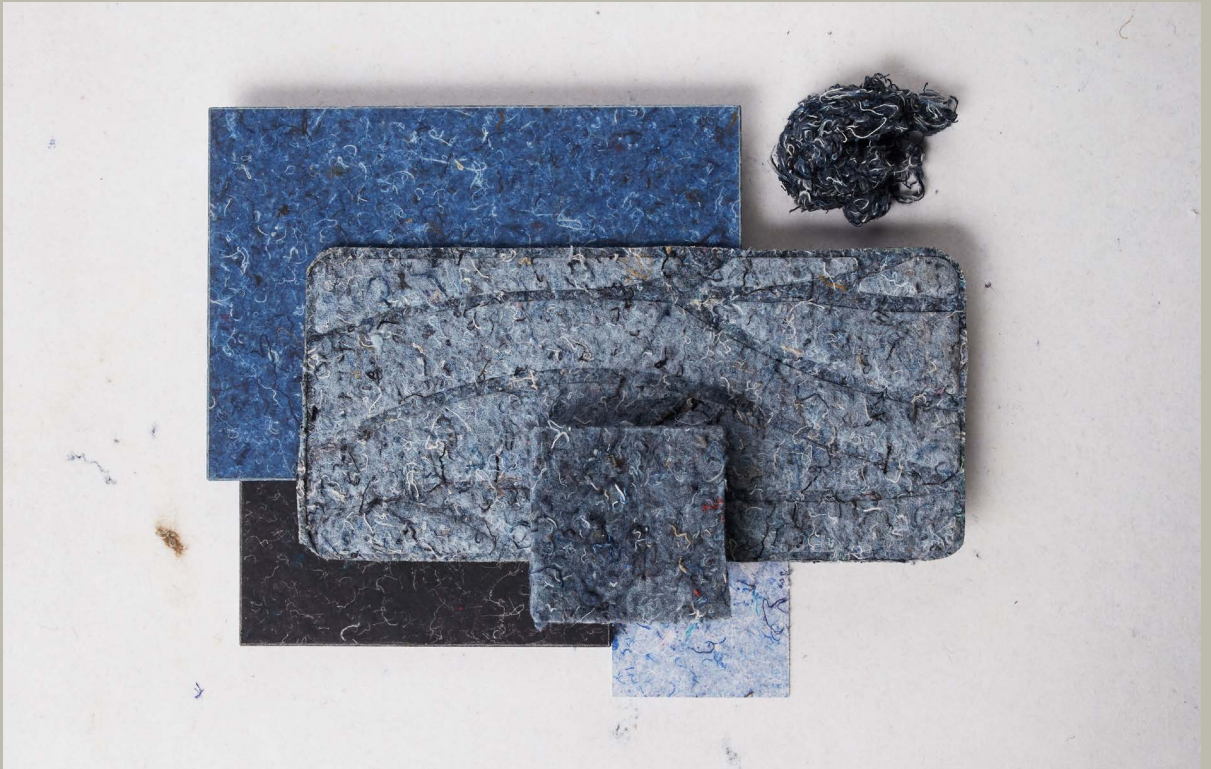


RE  
ZIGN®

By Planq

**REZIGN® VENEER**





## From textile waste to a recycled veneer

Rezn® is an inspiring and recycled veneer, made of textile residues en biobased fibres. With the material, we aim for other creators to bridge the gap between design and environmental consciousness. The veneer lends itself perfectly to interior products, with which we all can create a better tomorrow.



LEFTOVER



SHREDDING



SPINNING



SHEETS



PRESSING



DESIGN





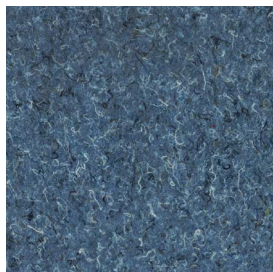
## Rezign® Veneer: General information

The veneer is made of textile waste, such as old denim, army clothing, suits and white denim. But also from biobased fibres, such as flax, hemp, and jute coffee bags. The fibres are first shredded into small pieces, which will then be carded into felt. The felt is eventually pressed with a biodegradable binder into a hard veneer.

The Rezign® Veneer has a gross size of 3050x1000 mm with a thickness of 1 - 1.3 mm. The nett dimension is 3000x970 mm. The material can be applicated in various sustainable solutions. For example, it can be attached to various types of panels. Or the material can be shaped and processed by different kinds of cutting, thermoforming, and even compression molding. These methods create a high degree of design freedom.

Different recycled textiles result in multiple colours of Rezign® Veneer. However, please note that since it is all recycled, different batches of clothing or biobased fibres may have a different colour outcomes. Therefore, the veneer is unique and one-of-a-kind.

## Materials



DENIM



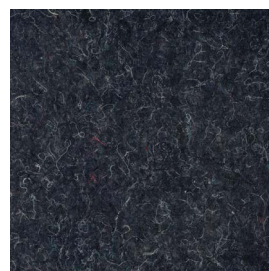
ARMY



FLAX



COFFEEBAGS



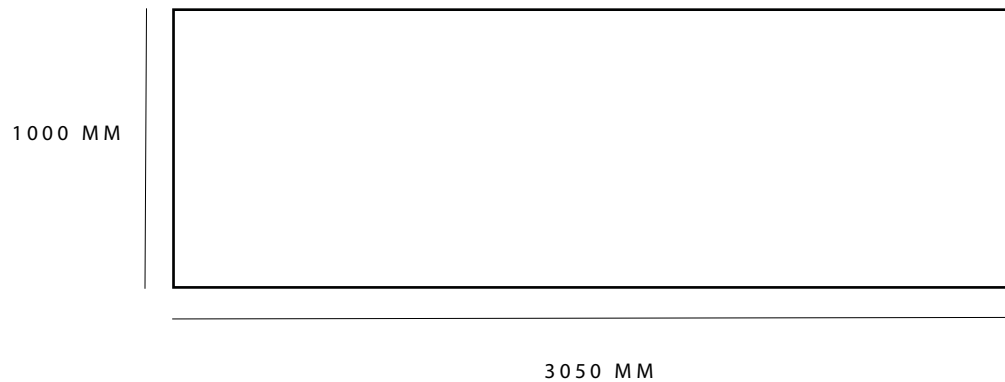
SUITS



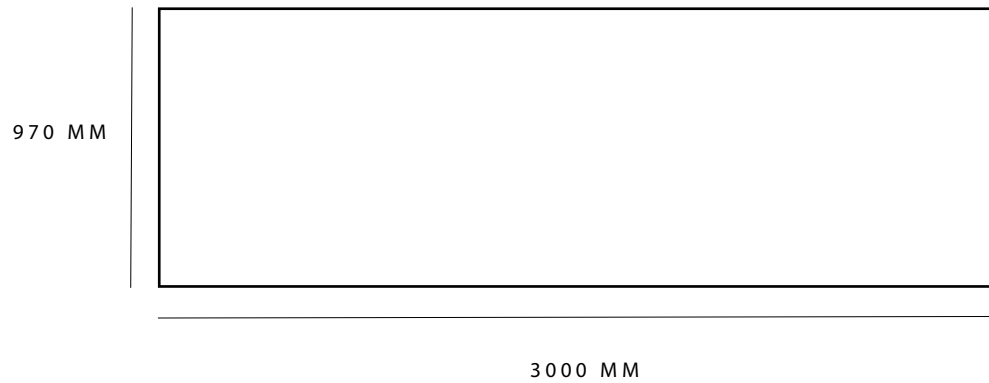
WHITE DENIM

## Dimensions

Gross standard size of the Reznig® Veneer: with a thickness of approx 1 mm



Nett size of the Reznig® Veneer:



## Shipment

The veneer will be shipped with the gross size as rolls in a box. Six veneers fit one box. Horizontal transport is also possible on request.





**ONE VENEER  
CONSISTS OF  
4 PAIRS OF  
JEANS**

## Rezign® Veneer: Process instructions

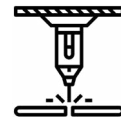
There are several ways to process the Rezign® Veneer. It is recommended to test and learn different processing techniques before designing. Since results may differ due to different type of machines.

### CNC CUTTING



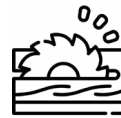
The benefit of a computer-controlled cutting process is that the shapes and patterns are very detailed. CNC can be used to cut the veneer straight, but it also offers the option to cut angles. These options of cutting create a high degree of design freedom.

### DIE CUTTING



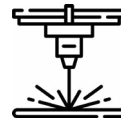
Die-cutting is suitable for large-scale productions with the Rezign® Veneer with an equal recess. However, it requires a cutting jig and is therefore not suitable for low production volume.

### SAWING



Sawing the Rezign® Veneer is very fast and straightforward. However, the veneer is very flexible and can be raised by vibration. We recommend therefore to fasten the veneer with a clamp.

### LASER CUTTING



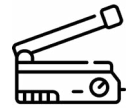
The advantage of laser cutting is that it is very precise. However, due to the heat of the laser, the edges can be hardened and discoloured.

### COMPRESSION MOLDING



Compression molding is the perfect method to design two- and three-dimensional shapes. Please note that with this method it is likely for the Rezign® Veneer to pleat.

## THERMOFORMING



Thermoforming is suitable to design two- and three-dimensional useable products. When heating the ReZign® Veneer please be aware that the forming temperature must not be higher than 120°C.

## GLUE & EDGE BANDING



The veneer can be glued to various wood panels. For sustainable glues, we recommend Circuwall Glue, Niaga Glue. But Standard D3 and spray glue are possible as well. For the panels we suggest, for example, Greengridz, Ecor, MDF, Chipwood etcetera. This method is perfect for panels, doors, tabletops or any other products with a solid look. For the edge banding, we recommend using a standard edge banding machine.

Please note: when pressing in order to attach the veneer to the panel, please be aware that the heat must not be higher than 50°C.



## Product information

### Water resistance

The veneer is made of recycled textiles and biological fibres in combination with a biodegradable matrix. It is splash-proof, however, it is not water-resistant.

### Cleaning

For the cleaning of the surfaces, use light-moist cotton or microfibre cloth. Then carefully wipe off and rub with a clean dry cotton cloth. Or make use of a feather whisper against dust-gathering. To clean a specific stain we recommend intervening immediately and using an organic solvent (ex. trichloroethylene). Do not use abrasive sponges as they may damage the product's surface. Avoid using acidic products, solvents, and products containing ammonia. Periodic and correct maintenance allows the product to keep its original aspect and lengthen the duration of its performance.

Only recommended for indoor use.

### Law provisions

This product card complies with the provisions of the law by decree 206/2005 (Consumer Code) and with the corresponding Ministerial Decree nr.10. It complies also with memorandum nr. 1 dtd. 03.08.2004 "Instructions to fill in and distribute the product card of wooden products and wood and furniture sector". This is part of the product and must be delivered to the final customer. Also, the general condition is on application to this product, you can find them on [www.planqproducts.com](http://www.planqproducts.com)

### Warning

Do not use different cleaning products from the ones mentioned above. Do not improperly use the product. Do not place hot objects on it, sit on the back, stand on it, or use the product as a ladder. Once disused, please make sure this product is disposed of in an environment-friendly way.

*REZIGN® BY PLANQ B.V. IS NOT LIABLE FOR ANY DAMAGE TO PROPERTY OR PERSONS CAUSED BY AN IMPROPER USE OF THIS PRODUCT.*



## Properties

|                     |          |                            |          |
|---------------------|----------|----------------------------|----------|
| <b>Glossiness</b>   | Matte    | <b>Fire resistance</b>     | Unknown  |
| <b>Translucence</b> | 0%       | <b>UV resistance</b>       | Moderate |
| <b>Structure</b>    | Closed   | <b>Weather resistance</b>  | Moderate |
| <b>Texture</b>      | Smooth   | <b>Scratch resistance</b>  | Moderate |
| <b>Hardness</b>     | Hard     | <b>Weight</b>              | Light    |
| <b>Temperature</b>  | Medium   | <b>Chemical resistance</b> | Moderate |
| <b>Acoustics</b>    | Moderate | <b>Renewable</b>           | Yes      |
| <b>Odour</b>        | None     |                            |          |

## Performance properties of Reznig® Veneer tested in Denim

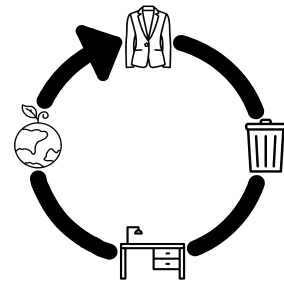
| Property  | Norm                | Result | Unit              |
|---|---------------------|--------|-------------------|
| Thickness                                       |                     | 1      | mm                |
| Density   | DIN EN ISO 1183 (A) | 1,16   | g/cm <sup>3</sup> |
|   |                     |        |                   |
| Tensile stiffness (E-modulus)                   | ISO 527             | 1,7    | GPa               |
| Tensile strength Rm                             | ISO 527             | 35     | MPa               |
| Elongation at break $\epsilon$ B                | ISO 527             | 2,5    | %                 |
| Flexural stiffness (E-modulus)                  | ISO 14125           | 2,3    | GPa               |
| Flexural strength                               | ISO 14125           | 44     | MPa               |
| Elongation $\epsilon$ at fM                     | ISO 14125           | 16     | mm                |
| Puncture impact – Maximum force (23°C)          | DIN EN ISO 6603     | 276    | N                 |
| Puncture impact - (23°C)<br>"Durchstoss-Arbeit" | DIN EN ISO 6603     | 0,47   | J                 |
| Puncture impact -<br>"Durchstoss-Gesamtenergie" | DIN EN ISO 6603     | 2,16   | J                 |
| Abrasion resistance                             | ISO 9352            |        |                   |
|   | Average abrasion    | 64,55  | Mg                |
| Water absorption                                | DIN EN ISO 62       | 5,1    | %                 |
|   |                     |        |                   |
| Boiling water resistance – change of mass       | ISO 4586 T7         | 12,02  | %                 |
| Boiling water resistance – change of thickness  | ISO 4586 T7         | 7,89   | %                 |
|   |                     |        |                   |
|   |                     |        |                   |

## Disclaimer

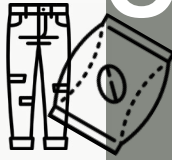
The information is presented in good faith, but no warranty, express or implied, is given. Please also note that the Reznig® Veneer consists of natural materials and recycled materials, properties of which may show changes. This is intended merely as an information resource to facilitate compliance with intended applications. While Planq B.V. has attempted to be as accurate as possible in compiling this datasheet, distributors, and users of this list should be aware that this list may contain unintended errors or omissions and may not be completely up to date. This list will not be considered controlling.

## CIRCULAR INTERIORS

FROM TEXTILE WASTE TO SUSTAINABLE SURFACES



F  
A  
S  
E  
0



# 01

### INVENTORY

Inventory and examination of the composition of the textiles and materials.

F  
A  
S  
E  
1



# 04



# >3000KG

### CERTIFIED SHREDDING

To shred all the textiles, we need at least 1500 kg of old clothing. After 4 weeks the fibres are ready to be spun.

# 07

# 50/50

### SPINNING

In week 7 the fibres are spun together in combination with recycled or biobased plastics into sheets on a roll.

# 09



### PROTOTYPING & TESTING

The materials and fibres got tested to determine the correct composition.

F  
A  
S  
E  
2

# 14

### PRODUCTION & TRANSPORT

The textile fibres got pressed into contemporary design products ready for its next life.



# end-of-life



F  
A  
S  
E  
3

### CLOSING THE LOOP

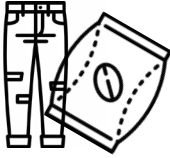
It is possible for the Rezipn® Veneer to re-heat and to re-design. In order to ensure designs last forever.

WITH JUST ONE CHAIR MADE  
FROM RECYCLED DENIM WE  
SAVE 16.275 LITERS OF DRINKING  
WATER.

# .Using your own textiles?

Underneath a small explanation of what 3000kg of your own supplied textile means in terms of furniture quantities.

## INVENTORY



Send us some information from the old / overstock clothing. What is the composition, what are the colours, and how many you have? Send us a sample and we will check it with the fiberization company

1-3 weeks

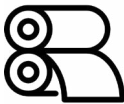
## CERTIFIED SHREDDING



To let the big machines do their job, we need at least 3000kg of textile, but we try to add it to an ongoing run. It costs €1,-/ kg to get your clothing shredded into fibres excluding transport and starting costs. You can even have this with a certification!

3-4 weeks

## SPINNING ROLLS



From your fibres, we make big felt rolls with added recycled plastic or biological plastic. With this half fabricate, we can make your chairs, tables or custom products.

3-4 weeks

## PRODUCTION



These rolls we press into your chair seats, tables, acoustics or even clothing hangers.

Let us know what you want, we make it!

x weeks

## PRODUCTION



3000kg = 2000 ubu chairs



2000 Unusual barstools



1000 Unusual chairs



2000 Planqtextile plates



1000 Acoustic panels



x custom products



# RE ZIGN®

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