



**SUSTAINABLE
DECORATIVE
PLYWOOD**

Kronobuild®



Kronobuild® Product Range

Kronobuild scots pine plywood is a new development among building and construction materials in Kronobuild range.

- Plyty wiórowe
 - PB P2
 - PB MR
 - PB P3 / (T&G)
 - PB P5 / (T&G)
 - PB FR / (T&G)
- OSB
 - OSB / (T&G)
 - OSB Firestop / (T&G)
 - OSB Airstop / (T&G)
- Plyty pilśniowe
 - MDF / HDF
 - MDF / HDF MR
 - MDF / HDF FR
- Sklejka
- Drewno konstrukcyjne KVH



Kronobuild® Decorative Plywood

Kronobuild decorative plywood is a softwood layered board. Plywood panels based on thick-layered veneer is our speciality.

Kronobuild decorative plywood is a unique combination of the following advantages:

- product
- quality
- environmental

Kronobuild decorative plywood assortment is based on the natural features and properties of softwood.



PRODUCT ADVANTAGES

SUSTAINABLE DECORATIVE PLYWOOD

Product advantages - Kronobuild® plywood surface classification

Kronobuild plywood range is based on three product groups, classified by surface aesthetics characteristics:

- *pure beauty*
- *natural*
- *rustical*

Additionally, our product offer includes fourth class – *strong*, a perfect material for construction projects.



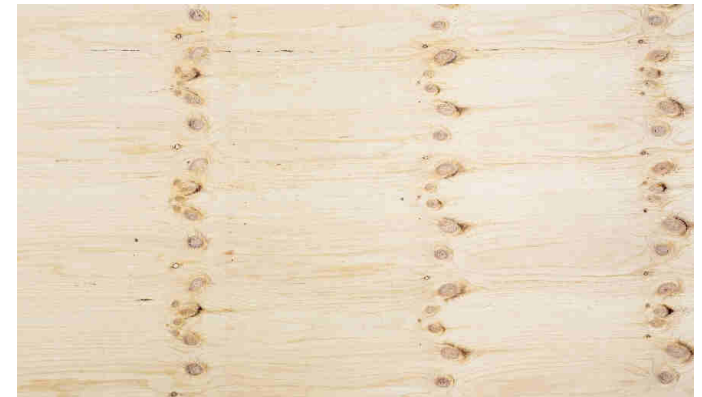
Class I: *pure beauty*



Class II: *natural*



Class III: *rustical*



Class IV: *strong*

Product advantages - Kronobuild® plywood surface classification

Class I: *pure beauty*

- selected and uniform surface with mildly accented wood grain.
- perfect for „pure visual look” fans
- the least frequent and most selected type of surface



Product advantages - Kronobuild® plywood surface classification

Class II: *natural*

- surface with a balanced combination of wood features with visible graining
- selected combination of all features, that can occur in natural wood



Product advantages - Kronobuild® plywood surface classification

Class III: *rustical*

- surface that brings together all the features variations of natural wood
- the most dynamic and diverse
- suitable for projects, where the wood pattern is to be expressive and noticable
- more accessible and most common



Product advantages - Kronobuild® plywood surface classification

Class IV: *strong*

- construction plywood used for structural and building elements, as well as packaging and temporary buildings
- can also be used as a finishing material in projects where no additional installation is required



Product advantages - Kronobuild® thick layer veneer

Thanks to modern technology and use of high-power production equipment, Kronobuild decorative plywood is produced based on high-quality thick-layer veneer.

Advantages of Kronobuild decorative plywood:

- high-quality edge thanks to stable and uniform thickness of veneer



Product advantages - Kronobuild® thick layer veneer

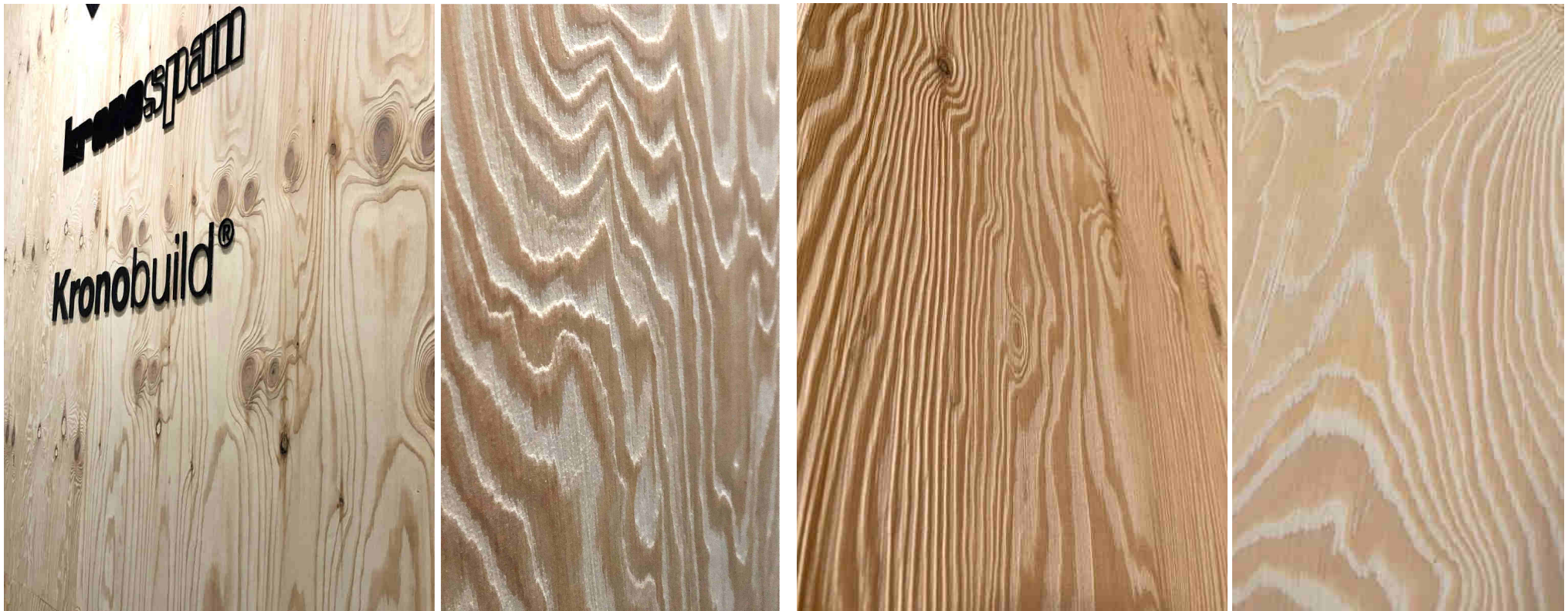
great aesthetics when 5D processing



Kronobuild®

Product advantages - Kronobuild® thick layer veneer

suitable for deep surface processing e.g. by grinding, brushing or sanding



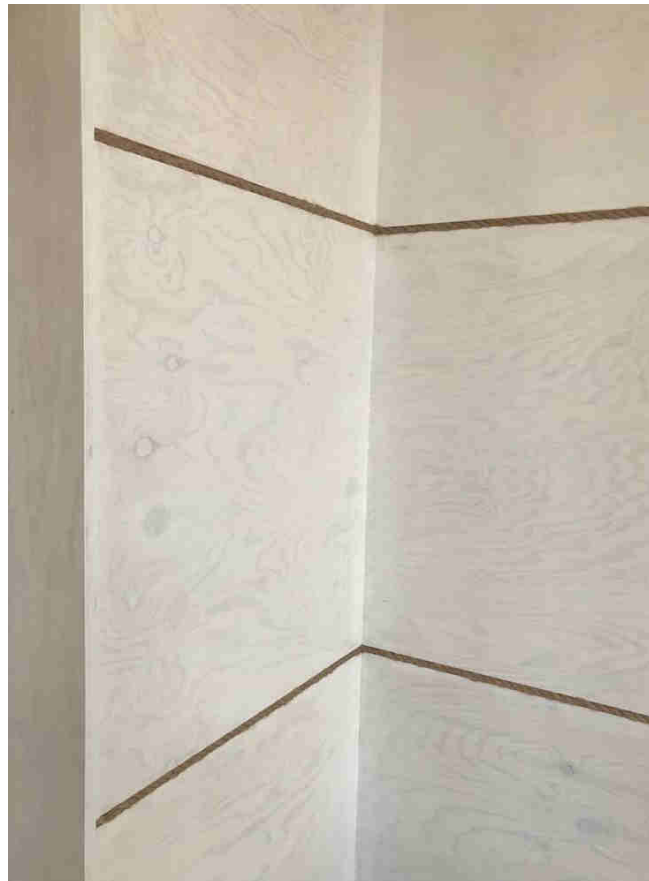
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Product advantages - Kronobuild® thick layer veneer

Suitable for refining by painting, oiling waxing



You support full recycling by using only natural oils!



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Product advantages - Kronobuild® plywood formats

Wide thickness range:

- Kronobuild plywood is available in the thickness range from 9 mm to 40 mm
- this allows a very wide range applications, both in construction and interior design industries



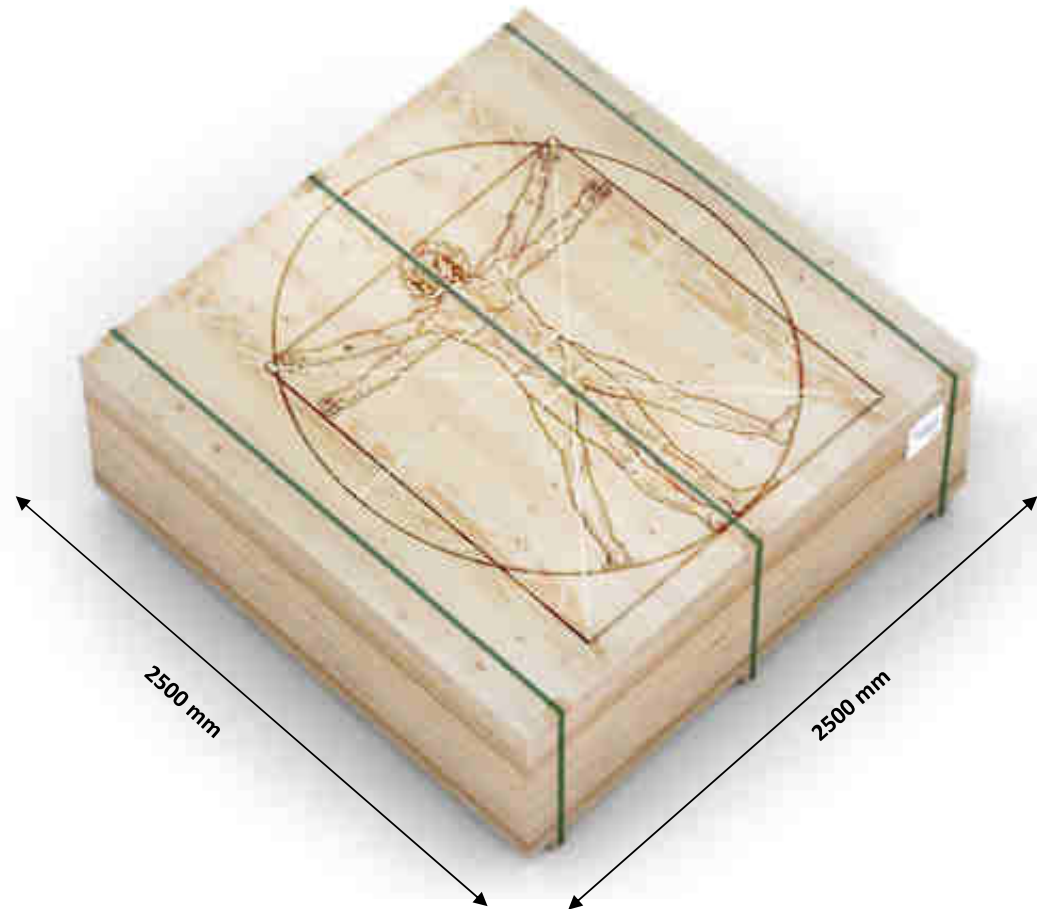
Product advantages - Kronobuild® plywood formats

Large panel format:

The production of thick-layer plywood in a large format 2500x2500 mm (jumbo) is possible due to full automation process and modern production solutions.

- 2500x2500 mm size enables manufacturing of large size elements in industrial production
- the use of a large format reduces the costs associated with waste on cutting

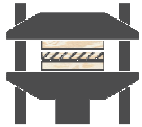
This type of assortment is difficult to achieve in manual production. Kronospan replaced hard physical labor with automation and robotization of process.



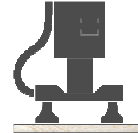
QUALITY ADVANTAGES

SUSTAINABLE DECORATIVE PLYWOOD

Quality advantages - technical specifications of Kronobuild® plywood



Stable thickness and even panel edge

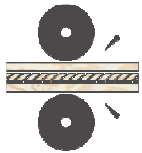


Very precise veneer preparation thanks to the latest technical solutions

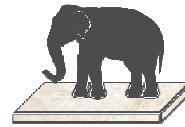


Kronobuild®

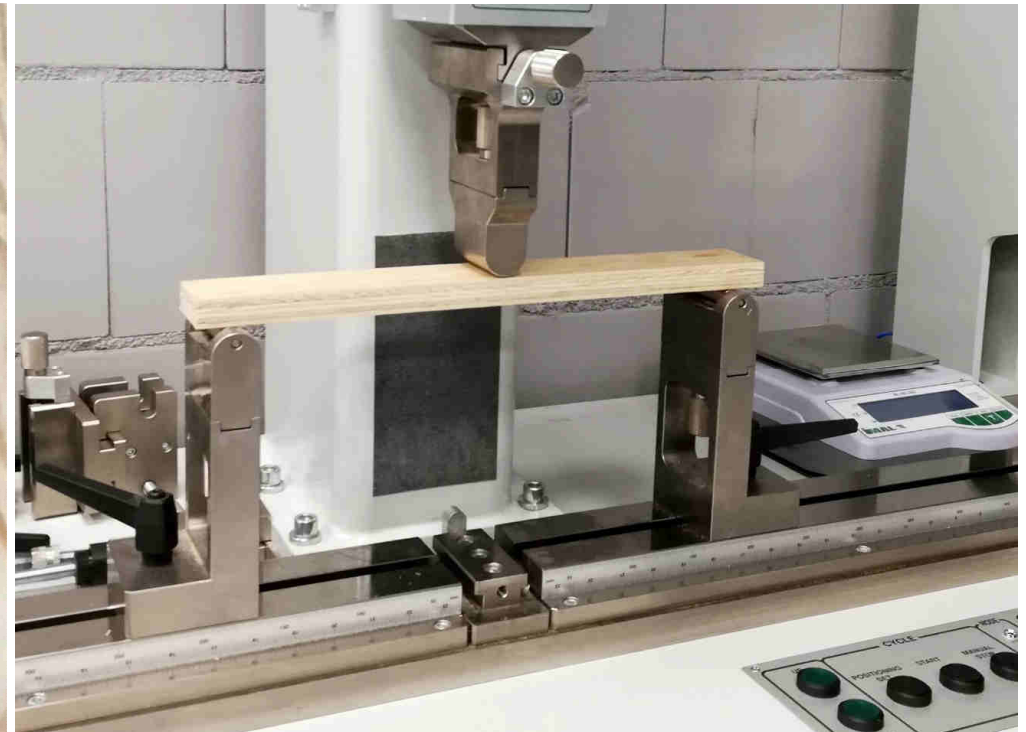
Quality advantages - technical specifications of Kronobuild® plywood



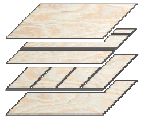
High-quality surface – panels are ground at the highest parameters of process accuracy



Stable strength parameters



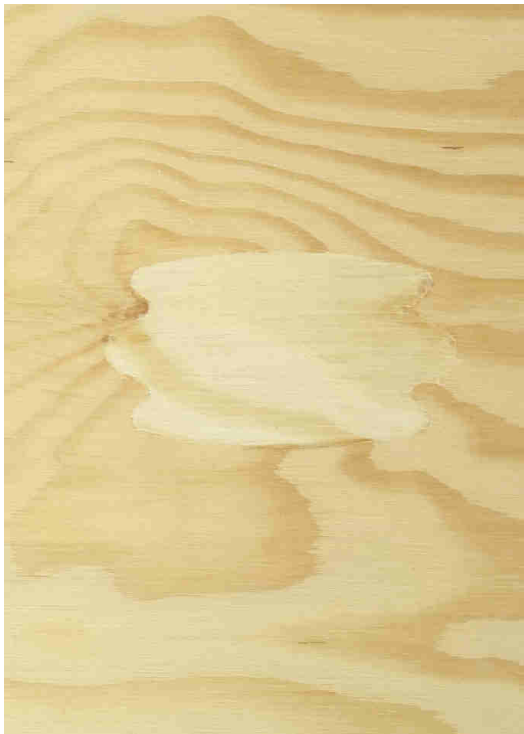
Quality advantages - technical specifications of Kronobuild® plywood



Possibility of veneer repair in all layers
– *plywood plus* version without defects



Highest class of moisture resistance (3rd class)
– suitable for external use



Quality advantages - technical specifications of Kronobuild® plywood

	Parameter	Test method	Description
1	Plywood variety		Softwood (90% pine + 10% spruce)
2	Plywood type		Moisture-resistant – phenolic resin
3	Surface parameters: length and width		2440 x 1220 mm, 1220 x 2440 mm, 2500 x 1250 mm, 1250 x 2500 mm, 2500 x 2500 mm
4	Thickness (mm)/number of layers		9/3, 12/4, 15/5, 18/6, 21/7, 24/8, 27/9, 30/10, 33/11, 36/12, 39/13
5	Veneer thickness		3.2 mm
6	Quality classes	EN 635-3	I/II, I/III, II/II, II/III, II/IV, III/III, III/IV, IV/IV
7	Density	EN 323	520-550 kg/m ³
8	Moisture content	EN 322	5-12%
9	Bending resistance	EN 310	40-50 MPa
	- along fibers		22-35 MPa
10	Modulus of elasticity	EN 310	5000-7000 MPa
	- along fibers		2500-3500 MPa
11	Flammability class	EN 13501-1	D-S1, d0
	Size tolerances		
12	- length/width	EN 324-1	+ - 3 mm
	- thickness		+0.3/-0.8
13	Rectangularity	EN 324-2	2 mm/m

Quality advantages - technical specifications of Kronobuild® plywood

Very low emission levels confirmed by certificates:

- FSC Mix Credit
- PEFC
- CARB 2
- CE 2+
- E1

- EN 712-1
- EN 16516

Certificate of CARB Compliance
No. TPC-18-CARB/20367001

In compliance with the order 1 California Air Resources Board, "Airborne Toxin Control Measure 18: Reduced Formaldehyde Emissions from Composite Wood Products (ATCM)", 20180407-03.12, (or 17 California Code of Regulations, if it has been amended) that the composite wood product:

Softwood Plywood
Type: **HWPW - VC**
Material: **pheno-formaldehyde resin**
Produced by the manufacturer: **Ultra Ply LLC**
Industrial ave 2784-S, 23100 Emerald, Grodno Region, Republic of Belarus

In the plant: **Ultra Ply LLC**
Industrial ave 2784-S, 23100 Emerald, Grodno Region, Republic of Belarus

It is certified by the manufacturer to the initial type-testing of the product and a factory production control and that the CARB approved third party certifier **MPA Eberswalde**,
Mittelangerstrasse 1, 16228 Eberswalde, Germany
has performed the initial inspection of the manufacturer, has verified the accuracy of used emission test procedures and quality control systems and carries the continuous supervision of the manufacturer's quality assurance program and product control.

This certificate attests that above mentioned product meet the ATCM emission requirement established in section 01252 of **CARB Phase 2** and may now carry the MPA Eberswalde TPC18-CARB certification (Phase 2) as long as the continuous supervision will be carried out by MPA Eberswalde.

Eberswalde, 19th of February 2020
Dr. Robby Wagner
Head of Certification Body

ZE05 Certificate
No. ZE05/20386001

According to the test report number of 23 September 2019 on the request issued for the product:

Softwood Plywood
0905 (pheno-formaldehyde resin)
Industrial ave 2784-S, 23100 Emerald, Grodno Region, Republic of Belarus
Thickness: 9 mm up to 40 mm

Produced by the manufacturer: **Ultra Ply LLC**
Industrial ave 2784-S, 23100 Emerald, Grodno Region, Republic of Belarus

In the plant: **Ultra Ply LLC**
Industrial ave 2784-S, 23100 Emerald, Grodno Region, Republic of Belarus

It is in compliance with the formaldehyde requirements according to the German Chemicals Ordinance (Chemikalien-Verbotsverordnung) (German Federal Law of Chemicals, Chemicals and Chemicals) 1311:100 - 4th edition, emission classed formaldehyde in class 1, category 1, (or amendment law 01-31-2005)

The test accuracy and certification body: **MPA Eberswalde**
Mittelangerstrasse 1, 16228 Eberswalde, Germany
has performed the initial inspection of the manufacturer, has verified the accuracy of used test procedures and quality control systems and carries the continuous supervision of the manufacturer's quality assurance program and product control.

A FORMALDEHYDE emission classed "low-emission" method and the factory production control has been established.

This certificate is valid as long as the continuous supervision is performed by MPA Eberswalde.

Eberswalde, 19th of February 2020
Dr. Robby Wagner
Head of Certification Body

CERTIFICATE
NR 0286/2020

1. Name of product: **Plywood**
Customer: **Ultra Ply LLC**
Industrial ave., 2784-S, 23100 Emerald, Grodno region, Belarus

2. Producer: **Ultra Ply LLC**
Industrial ave., 2784-S, 23100 Emerald, Grodno region, Belarus

3. Particulars on the product:
- date of production: 02.12.2019
- date of delivery: 10.12.2019

4. According to the same technology are produced **Ultra Ply LLC, Industrial Ave., 2784-S, 23100 Emerald, Grodno region, Belarus plywood**

5. Specification of the determined substances: **formaldehyde**

6. Method and conditions of the tests:
- method of the determination: chamber method (chamber capacity 0,225 m³)
- test conditions: temperature 23 ± 0,5°C, relative humidity of the air 65 ± 2 %
- number of packages per air per hour: 1 m³/h m²

7. Quality of emission formaldehyde:

Thickness (mm)	Date of the measurement	Equivalent concentration of formaldehyde in the air of chamber (ppm)
40	30.12. - 31.12.2019	0,022

8. Statement:
Obtained value of emission is 4 0,022 ppm, so the tested product complies with requirements contained in REA Specification G35-MAT-2118-1 dated 2018-03-28 and requirement of German Chemicals-Verbotsverordnung for wood based materials.

Grodno Mills, 09.01.2020

CERTIFICATE OF REGISTRATION

This is to certify that **LLC "Ultra Ply"** (LLC, Industrial ave., office 3, Emerald, Grodno region, 23100, Belarus)

has been audited and found to meet the requirements of international FSC®-COC 1804 (Version 3.0) (Standard FSC®-COC-1804) (Phase 2) by the FSC Chain of Custody Certification

Scope of certification: Production of plywood

Product: **W1 L1 Veneer plywood**
W1 L1 Lumbering

Certificate number: **TT-COC-00716**
Valid until: 2020
Certificate was issued: 13 October 2019
Certificate was valid: 1 October 2019
Date of next certificate: 9 October 2020

CERTIFICATE OF REGISTRATION

This is to certify that **LLC "Ultra Ply"** (LLC, Industrial ave., office 3, Emerald, Grodno region, 23100, Belarus)

has been audited and found to meet the requirements of standard **PEFC® ST-1439**

Chain of Custody Certification is concerned: **Production and sale of plywood**

Scope of certification: Production and sale of plywood

Product: **0905 Wood based panels**
0905 Plywood

Raw material origin: Certified Material, Neutral Material and Other Material

Method: PEFC Percentage Method

Certificate number: **TT-PEFC-C0037**
Valid until: 2020
Certificate was issued: 19 February 2019
Certificate was valid: 19 February 2019
Date of next certificate: 19 February 2020

CE

LEISTUNGSERKLÄRUNG
Nr. DuP/SMZ-CP1-2020/0113

1. Produkt-Identifizierung:
Spanplatten, wasserbeständig 9-40 mm

2. Verwendungsart des Produkts:
Spanplatte für allgemeine Zwecke, für Außenbereich, technische Klasse EN 409 - 3

3. Name und Kennzeichnung des Herstellers:
Ultra Ply GmbH
Industriestraße, 2784-S, Brunnengraben, Belarus, 231000

4. Name und Adresse des beauftragten Verarbeitlers (nicht zurechtfinden):
AVCP System 2+

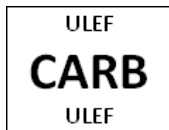
5. System AVCP:
AVCP System 2+

6. Normzitierte Norm:
EN 13986:2004+A1:2015

7. Hersteller-Dezision:
Hierfür hat die MPA Eberswalde nur die Einweisung des Unternehmens sowie die Produktion und die Zertifizierung der Spanplatte bestätigt. Es wurde nicht auf die CE-Kennzeichnung der Spanplatte geprüft. Die CE-Kennzeichnung der Spanplatte ist nur dann zulässig, wenn die Spanplatte die Anforderungen der EN 13986:2004+A1:2015 (Technische Leistungsanforderungen) erfüllt. Die CE-Kennzeichnung der Spanplatte ist nur dann zulässig, wenn die Spanplatte die Anforderungen der EN 13986:2004+A1:2015 (Technische Leistungsanforderungen) erfüllt.

8. Datenblatt Eigenschaften:

Wasserliche Merkmale	Erlaubte Verwendungsart	minimale Dicke (mm)	Wert	Normzitierte Norm
Strukturmerkmal (gemäß EN 13986-1)	T3 (30 min) / T4 (30 min) / T5 (30 min) / T6 (30 min) / T7 (30 min) / T8 (30 min) / T9 (30 min) / T10 (30 min)	9	0,42-0,60	EN 417
		10	0,42-0,60	EN 417
Strukturmerkmal (gemäß EN 13986-1)	T3 (30 min) / T4 (30 min) / T5 (30 min) / T6 (30 min) / T7 (30 min) / T8 (30 min) / T9 (30 min) / T10 (30 min)	10	0,42-0,60	EN 417
		11	0,42-0,60	EN 417

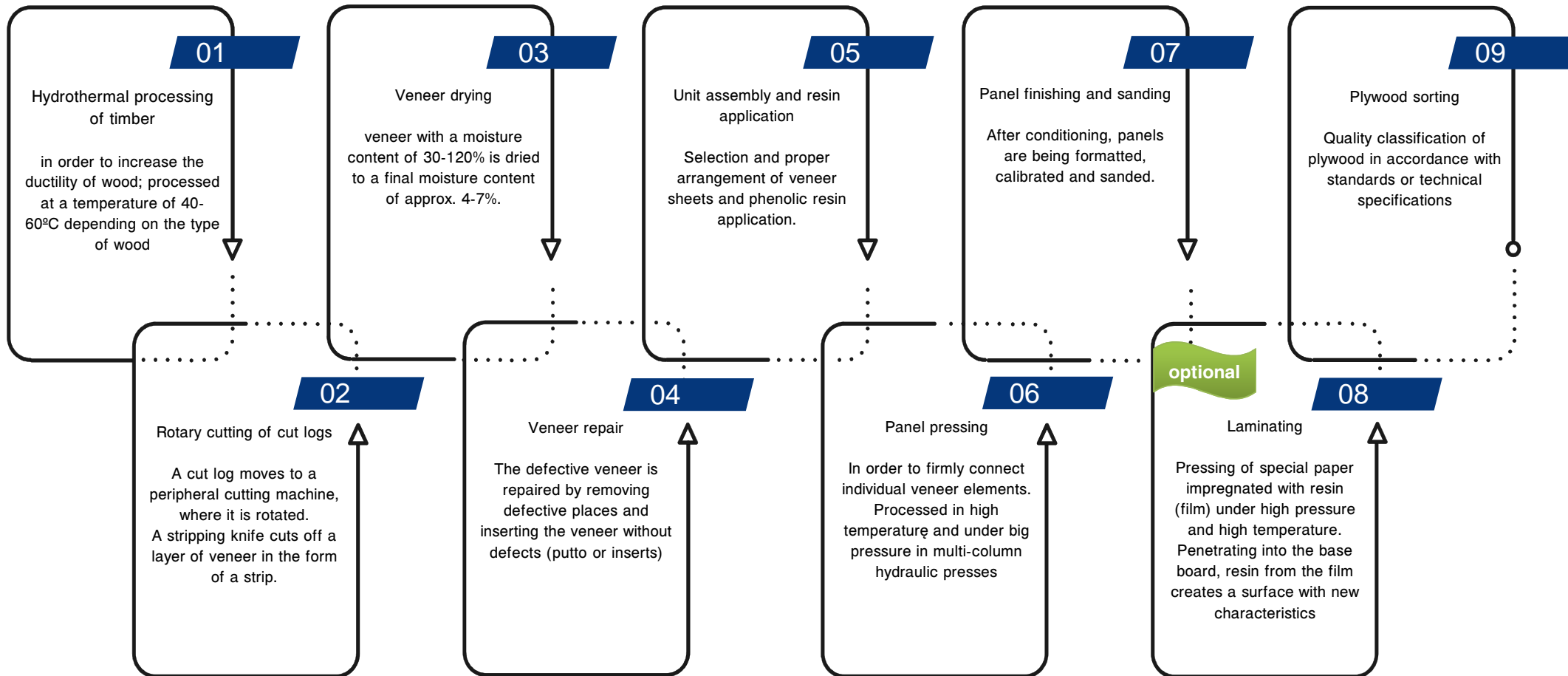


Znak odpowiedzialnej gospodarki leśnej

Kronobuild®



Quality advantages - technical specifications of Kronobuild® plywood



ENVIRONMENTAL ADVANTAGES

SUSTAINABLE DECORATIVE PLYWOOD

Environmental advantages - product sustainability

Product Sustainability

Kronobuild plywood is produced in accordance with the idea of sustainable development and is in full harmony with the environment

Plywood Kronobuild is produced only on the basis of timber, coming from legal sources, certified with FSC and PEFC



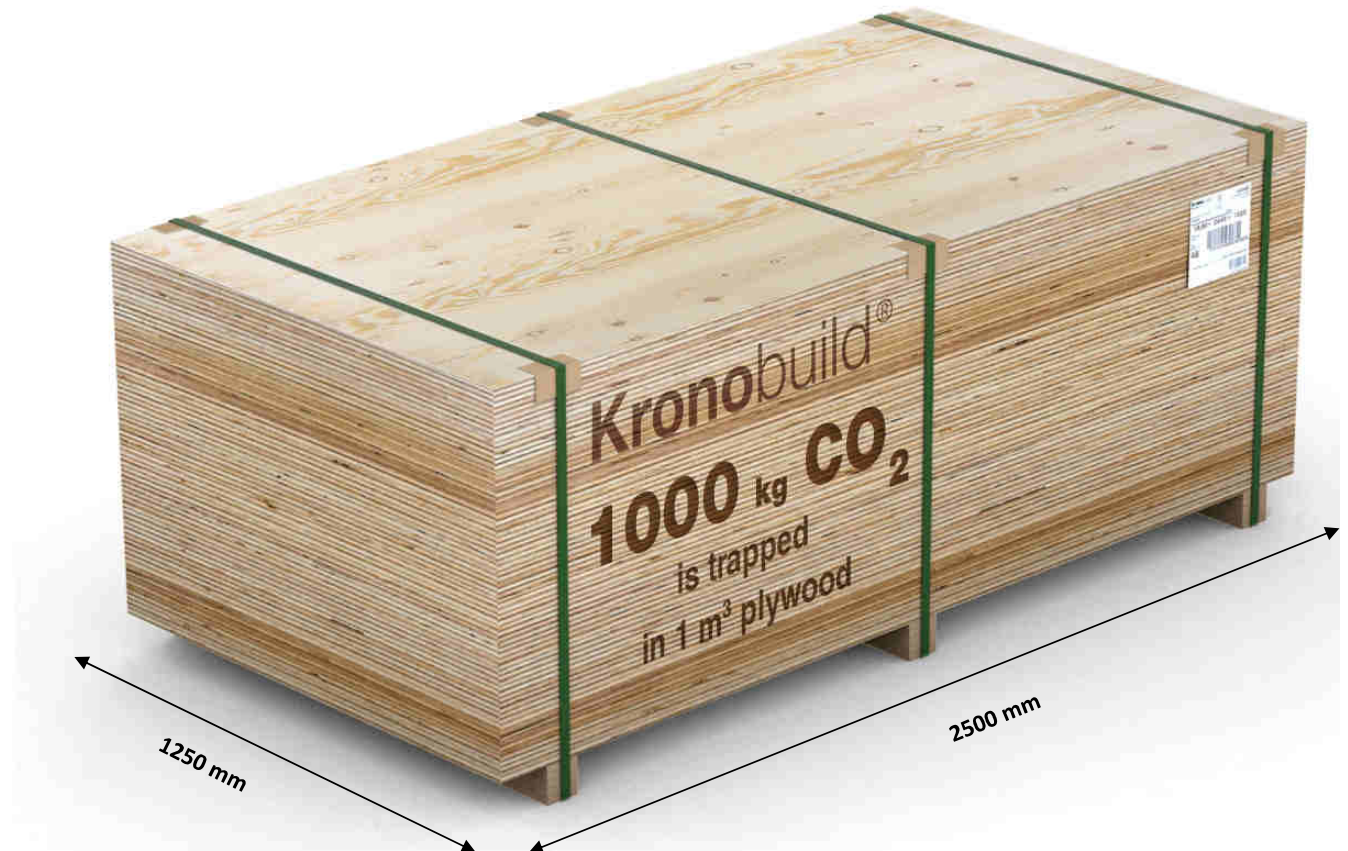
Kronobuild[®]

Environmental advantages - product sustainability

Product Sustainability

Timber, used for the production of Kronobuild plywood, permanently binds carbon dioxide, which is harmful to the environment.

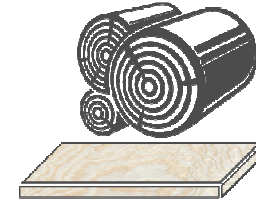
Wood contained in 1m³ of plywood permanently binds 1 ton of CO₂, thanks to which greenhouse effect is reduced.



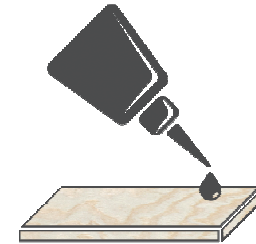
Environmental advantages - product sustainability

Product Sustainability

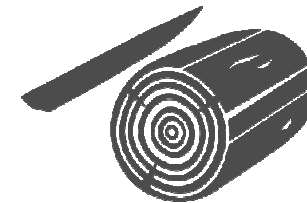
2 times less wood is needed for the production of Kronobuild plywood than for the production of glued wood panels



2 times less binder is needed for the production of Kronobuild thick layer veneer plywood than for standard plywood production



Kronobuild plywood is made with knives, not saws, so that no sawdust is generated, as with standard wood processing



Environmental advantages - product sustainability

Product Sustainability

The large format 2500x2500mm of Kronobuild plywood gives better optimization of the board cutting, which significantly reduces the waste costs.



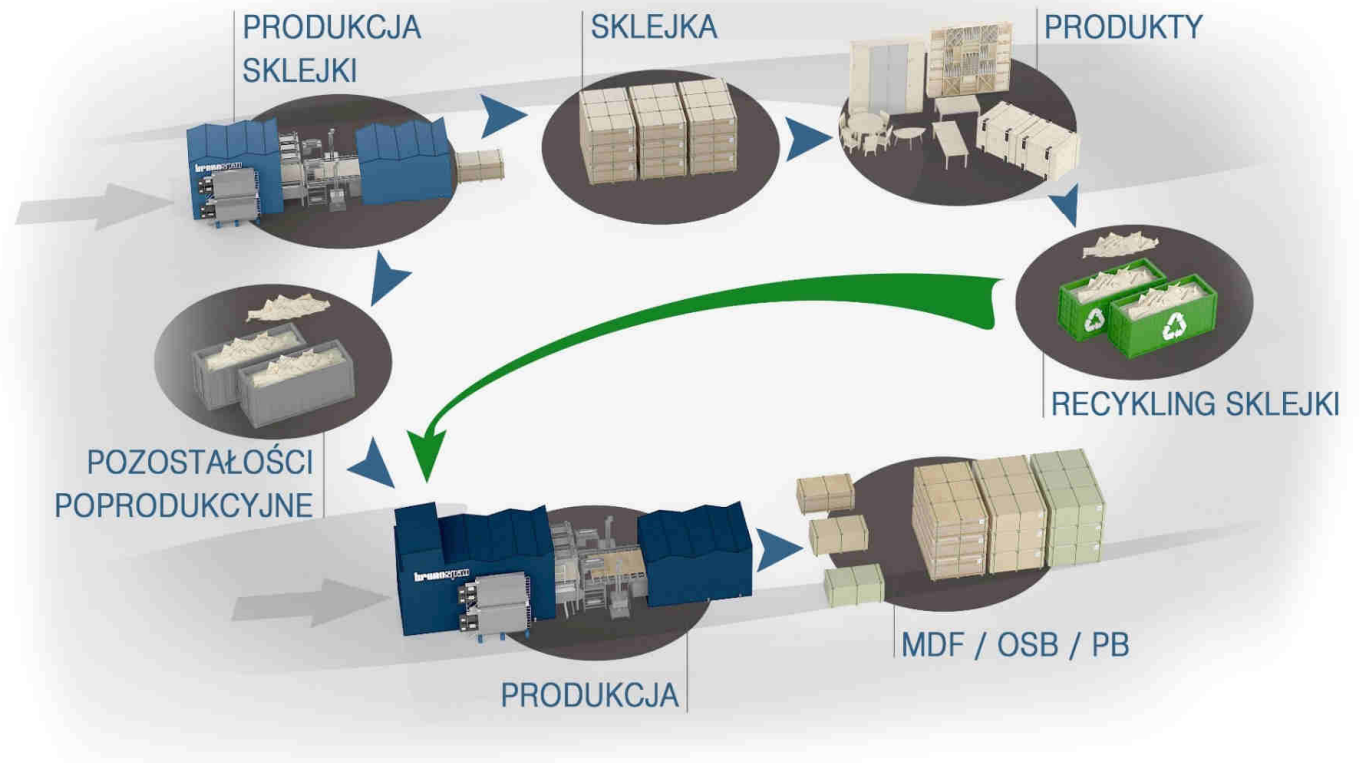
Environmental advantages - product sustainability

Product Sustainability

Creating Kronobuild plywood, Kronospan paid special attention to the product life cycle and recycling.

We use all post-production residues, such as barks, wood chips or defective veneer - they are processed on site as a raw material for other production processes.

Wooden logs are sold as a product used in garden architecture.



Environmental advantages - product sustainability

Product Sustainability

Kronobuild plywood is a pure, natural product without any additional coating, laminating or veneering. It is fully recyclable, when finished with natural oils.

Kronospan recycles plywood, processing it into OSB or particle board, for example. This recycling process can be repeated several times, only in the final stage of life, the product should be used as biomass for energy production.

- to ensure ease of recycling, refined plywood should be finished only with natural materials such as oils or waxes
- plywood-based furniture made without plastics is recyclable



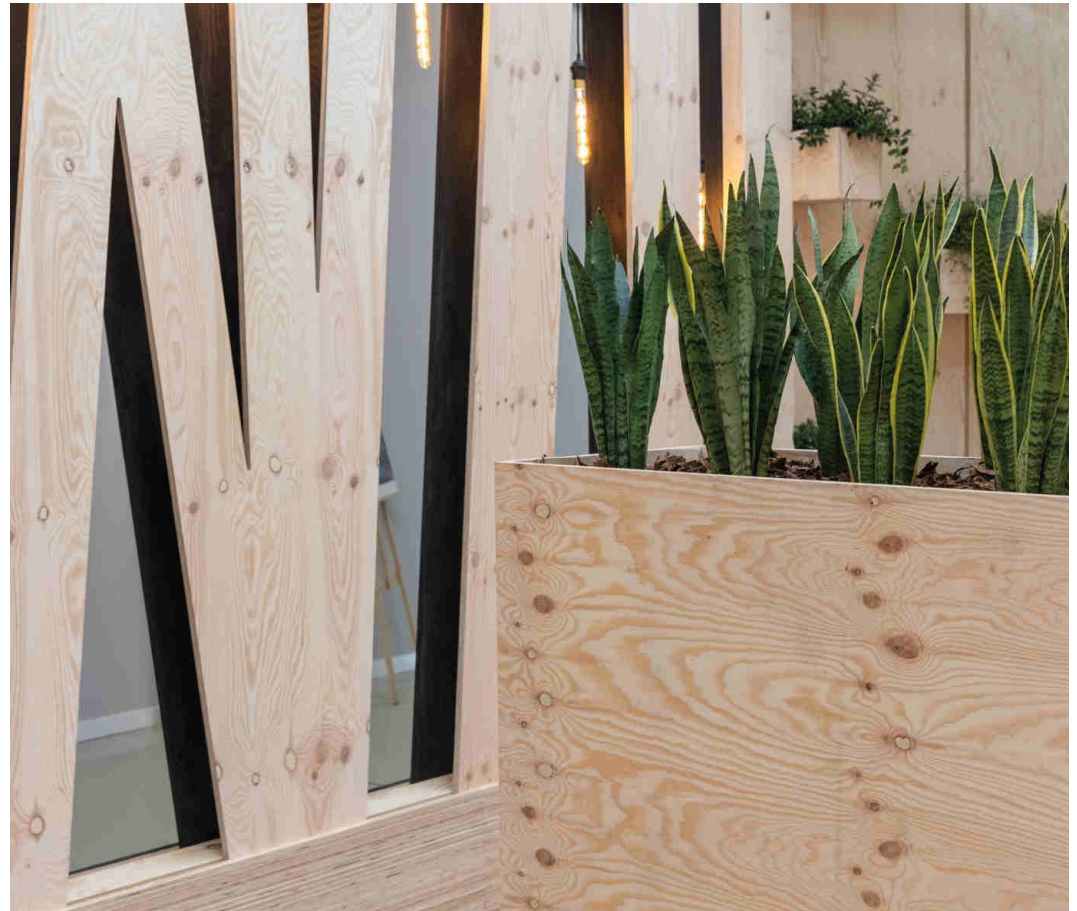
PLYWOOD APPLICATION

SUSTAINABLE DECORATIVE PLYWOOD

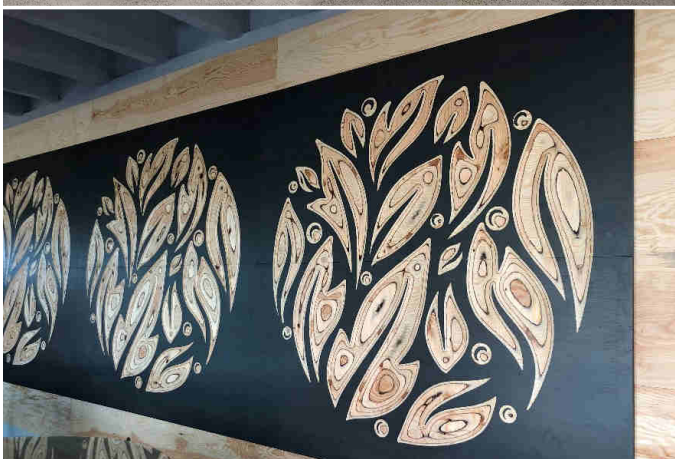
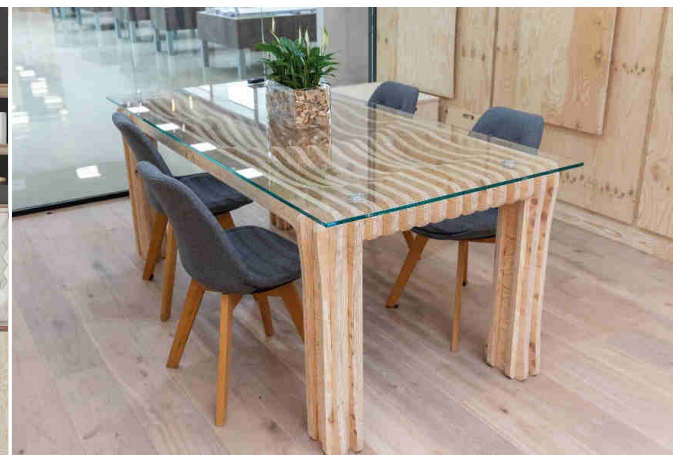
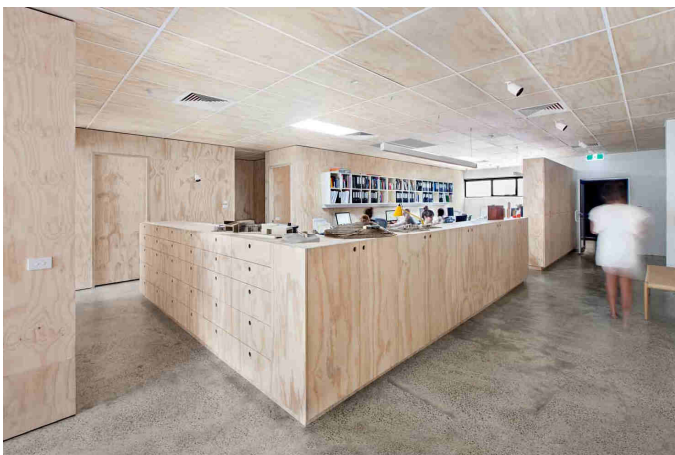
Kronobuild® decorative plywood application

The combination of product, quality and environmental advantages gives unlimited application possibilities and thus plywood can be used in various industries:

- in furniture production
- in interior design
- in building and construction
- in packaging production
- in means of transport and boatbuilding
- DIY industry
- in advertising: billboards, trade fair exhibitions and temporary buildings



Kronobuild® decorative plywood application – furniture and interior design

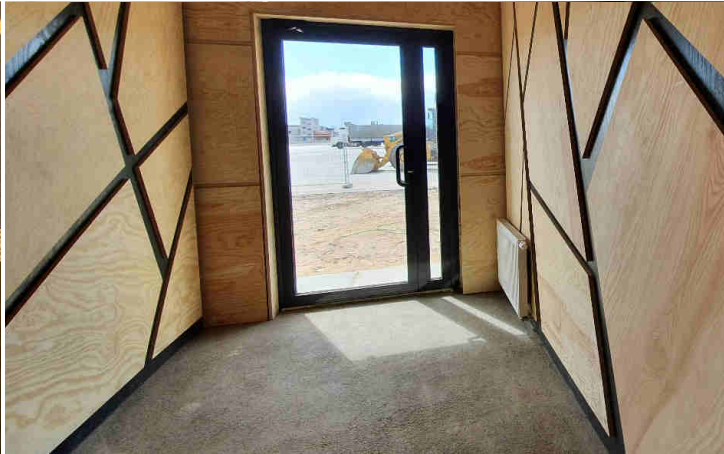
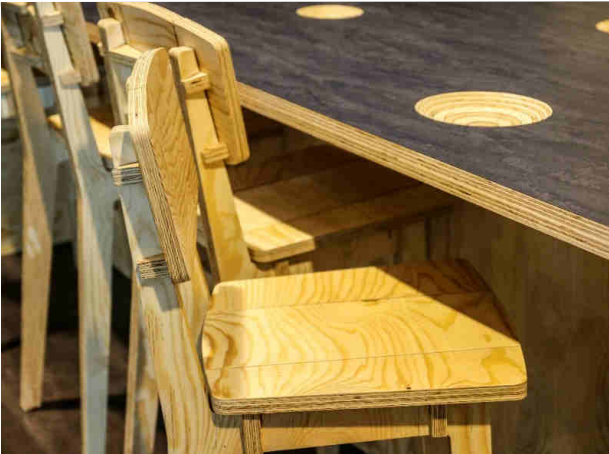
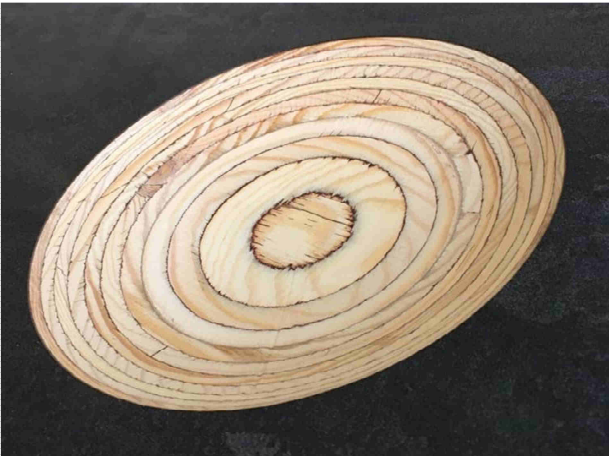


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Kronobuild® decorative plywood application – furniture and interior design



Kronobuild® decorative plywood application – furniture and interior design



Kronobuild® decorative plywood application - packaging



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Kronobuild® decorative plywood application - construction



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Kronobuild® decorative plywood application - construction



Kronobuild®

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Kronobuild® decorative plywood application - exhibition



Kronobuild® decorative plywood application - exhibition



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Kronobuild® decorative plywood application - exhibition



LOGISTIC DATA

SUSTAINABLE DECORATIVE PLYWOOD

Kronobuild® decorative plywood logistic data

Thickness	Number of layers	Packaging			
		pcs./pal	m3/pal	ton/pal	pal/auto
9 mm	3 layers	78	2,19	1,2	17
12 mm	4 layers	58	2,18	1,2	17
15 mm	5 layers	46	2,16	1,2	17
18 mm	6 layers	39	2,19	1,2	17
21 mm	7 layers	33	2,17	1,2	17
24 mm	8 layers	29	2,18	1,2	17
27 mm	9 layers	26	2,19	1,2	17
30 mm	10 layers	23	2,16	1,2	17
33 mm	11 layers	21	2,17	1,2	17
36 mm	12 layers	19	2,14	1,2	17
39 mm	13 layers	18	2,19	1,2	17



Thank you for your attention

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