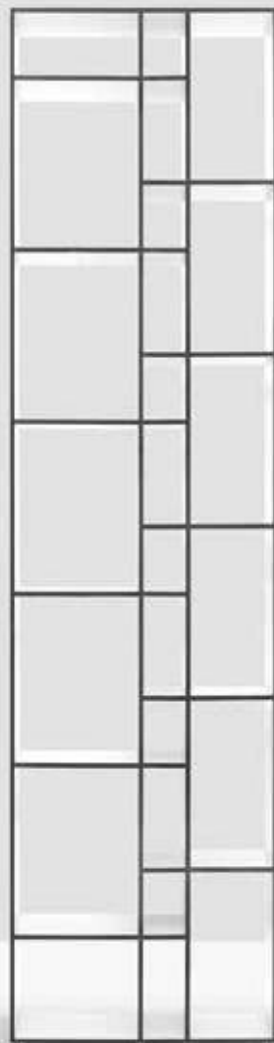


ZEITRAUM

CODE 1

Design by Nana Gröner, 2007



Furniture Footprint

CODE 1,2

Design by Nana Gröner, 2007

The aesthetic of the shelving is based on graphical structures borrowed from the cladding of Modern architecture. The simple outer-form is an exciting contrast to the differentiated interior. The four compartment sizes can accommodate a wide range of articles – files and box-files, paperbacks, DVDs and CDs. CODE 1 is ideal for use in all living quarters.

ZEITRAUM furniture meets the highest quality and environmental standards and is primarily made of solid wood. All the materials we use come from responsible manufacturing and are for the most part sourced directly from Germany. The following describes the product: CODE 1,2. Due to the proportion of renewable raw materials, among other things, ZEITRAUM products can contribute to a good rating in certification programmes for sustainable buildings, such as LEED. For more information, please do not hesitate to contact us at any time.

Product details (CODE 1)

Product category	Storage & shelves			
Weight	ca. 37 kg			

Environmental details

Recycled content/ renewable raw materials	ca. 1,1 % recycled material (steel, share: 2,2 %, ø 50 % recycled content) ca. 0,65 % recycled material (aluminium, share 1,3 %, ø 50 % recycled content) ca. 87 % renewable materials
Recyclability	ca. 96,5 % wood based materials (thermal utilisation) ca. 1,3 % aluminium ca. 2,2 % steel
Repairability	Moderately repairable. We will be happy to assist with spare parts and service where necessary and possible.

Manufacturing details

Furniture element	Production site	Production partner since	Visited by ZEITRAUM	Code of Conduct signed
Complete furniture	Bavaria, Germany	2021	Yes	Not yet

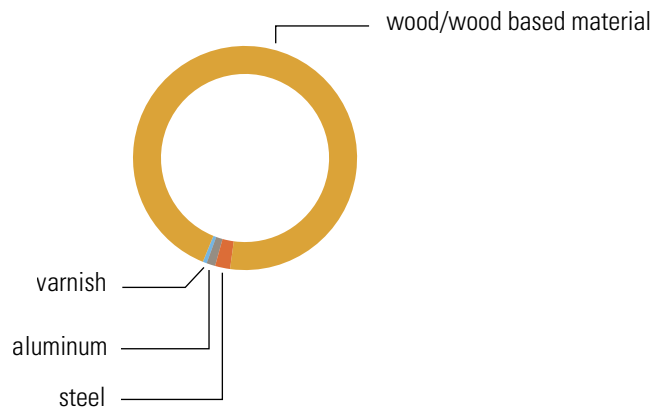
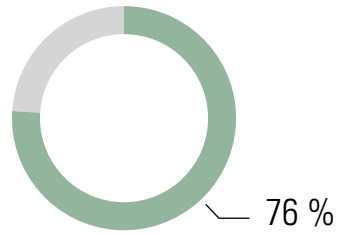
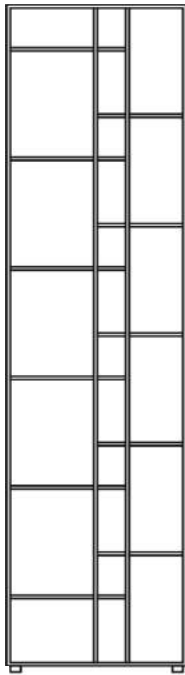
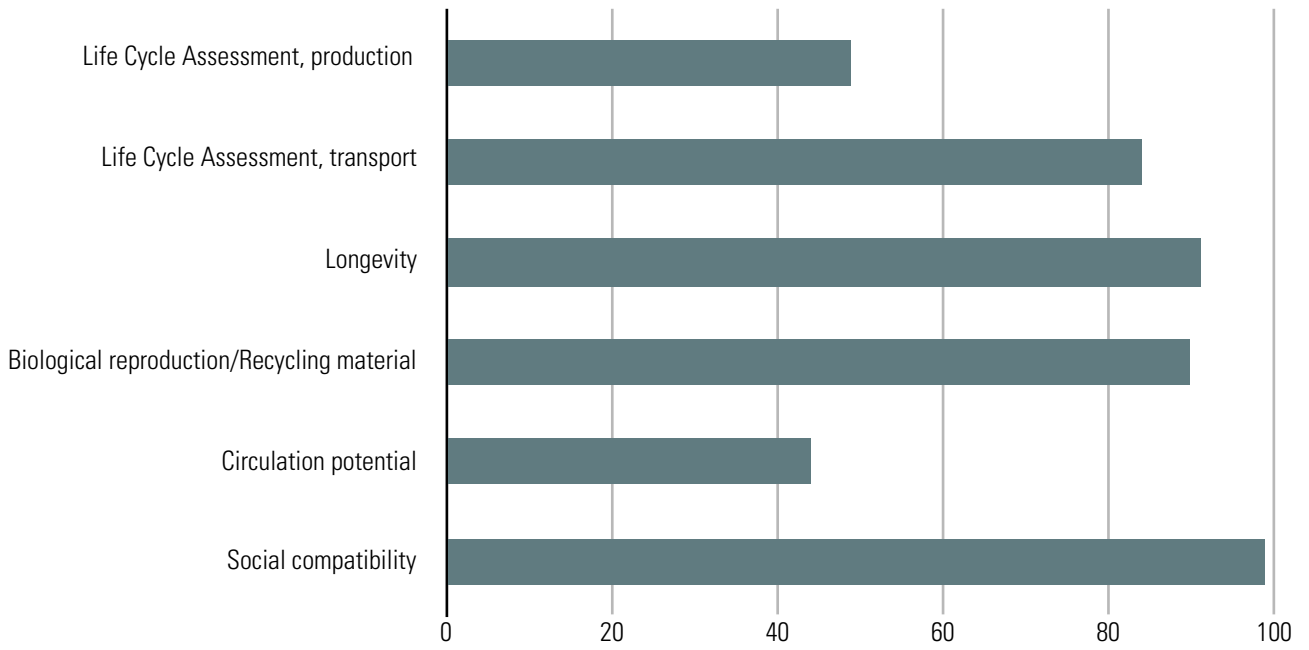
Packaging

Flatpack	No
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Warehouse

Country	Federal state
Germany	Bavaria

CODE 1; oak, veneered



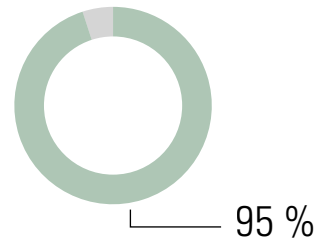
- wood/wood based material
- steel
- aluminum
- varnish
- PVAC adhesive

CODE 1; oak, veneered	Material/Product rating						
	Oak	MDF (black)	Steel	Aluminium	Varnish	PVAC	Weighted rating, %
Life Cycle Assessment, production	10	4,66	5,33	0	5	10	49,04087 %
Life Cycle Assessment, transport	9	8,5	4	4	9	6,5	83,7315 %
Longevity	10	9	10	9	9	9	90,735 %
Biological reproduction/ Recycling material	10	9	6	6	0	0	88,967 %
Circulation potential	8	4	10	8	0	4	43,718 %
Social compatibility	10	10	8	8	9	9	99,236 %
Average rating, $\bar{\sigma}$	9,5	7,526	7,221	5,833	5,333	6,416	Total weight
Share in kg	2	33,8	0,81	0,47	0,21	0,01	37,3
Share in %	5,36 %	90,61 %	2,17 %	1,26 %	0,56 %	0,02 %	
Weighted rating	0,509	6,819	0,156	0,073	0,029	0,001	
Product rating in %	75,87						

Packaging	Material/Product rating		
	Cardboard	PE fleece	Weighted rating, %
Life Cycle Assessment, production	10	3	97,302 %
Life Cycle Assessment, transport	9	6,5	89,031 %
Longevity	4	5	40,38 %
Biological reproduction/Recycling material	6	0	57,69 %
Circulation potential	10	10	99,99 %
Social compatibility	10	9	99,606 %
Average rating, $\bar{\sigma}$	8,166	5,583	Total weight
Share in kg	7,5	0,3	7,8
Share in %	96,15 %	3,84 %	
Weighted rating	7,851	0,214	
Product rating in %	80,65		



1 Oak



Tab. 1 A: Material data sheet, oak, general¹²

Material group	Natural material; wood; hardwood
Botanical name	<i>Quercus robur L./Q. patrea Liebl. (Fagaceae)</i>
Name	European Oak (GB, US); Eiche (D), Sommereiche (D); Chêne (F)
Material Norm. Ref.	DIN EN 13556: QCXE
Origin	Germany, (Central Europe)
Occurrence	Europe to Asia Minor; North America; most common European occurrence in France
Use	Solid and veneer, mainly sliced veneer; furniture and interior fittings; paneling and parquet; structural timber, etc.

¹ WAGENFUEHR, R. (2007) - Wood Atlas. (6) Leipzig: Hanser Wirtschaft, Fachbuchverlag Leipzig, pp. 255-277

² LOHMANN, U. (2010) - Wood encyclopedia. The standard work for wood and forestry. (4) Hamburg: Nikol-Verlag, pp. 284-285

Tab. 1 B: Material data sheet, oak, specific³

General description

Certifications/Information	FSC and PEFC on request	
Life cycle assessment data hardwood, average (GER)		10
Resource input per kg	A1-A3	
Total non-renewable primary energy (PENRT)	2,18 MJ	10
Use of freshwater resources (FW)	0,00048 m ³	10
Environmental impact per m³		
Global Warming Potential (GWP)	-1,74 Kg CO ₂ -eqv.	10
Environmental impact Transport, per 1000 kgkm (690 kg/m³)		9
Production site: Germany/ZEITRAUM		
Truck - ca. 300 km	A4	10
Total non-renewable primary energy (PENRT)	362,4 MJ	
Use of freshwater resources (FW)	0,019164 m ³	
Global Warming Potential (GWP)	26,907 Kg CO ₂ -eqv.	
Main raw material origin: Germany, Central Europe/Production site		
Truck - ca. 1500 km	A4	8
Total non-renewable primary energy (PENRT)	1812 MJ	
Use of freshwater resources (FW)	0,09582 m ³	
Global Warming Potential (GWP)	134,535 Kg CO ₂ -eqv.	
Sustainability Assessment		
Longevity	Very durable/repairable (> 20 years)	10
Biological reproduction/ recycled material	100 %	10
Circulation potential	70 % - 99 % (technological/recycling)	8
Socially compatible	Yes	10
Total average rating		9,5
Processing		
Mechanical	Good; can be cut and peeled, suitable for turning and carving; pre-drill thin wood for nailing	
Drying	Moderately good; slow; tendency to tear and warp; predrying outdoors favorable; good durability	

³ BMI 2021: Oekobaudat. Database <https://www.oekobaudat.de/no_cache/en/database/search.html> Accessed, on 10/27/2021

Adhesion	Good; alkalis can cause stains	
Surface finishing	Good; can be stained and varnished, if necessary use pore filler when varnishing; tinting of wood color by smoking	
Natural durability DIN EN 350-2	durable; sapwood low; heartwood durable; also in water; durability class 2	

Physical properties

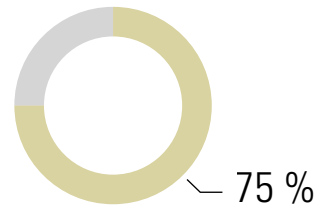
Kiln density (0 % wood moisture content)	390... 650... 930 kg/m ³	
Bulk density (12 - 15 % wood moisture)	430... 690... 960 kg/m ³	
Pore ratio	ca. 57 %	
Shrinkage rate at 1 % moisture reduction	radial - 0,20 %; tangential - 0,32 %; volume - 0,45 %	

Mechanical properties

Compressive strength (σ_{dB})	Q. robur: 54... 61... 67 N/mm ² Q. petraea: 48... 65... 70 N/mm ²	
Flexural strength (σ_{bB})	Q. robur: 74... 88... 105 N/mm ² Q. petraea: 78... 110... 117 N/mm ²	
Tensile strength ($\sigma_{zB} $)	50... 90... 180 N/mm ²	
Tensile strength ($\sigma_{zB} \perp$)	2,6... 4,0... 9,6 N/mm ²	
Shear strength (τ_{aB})	6,0... 11,0... 13,0 N/mm ²	
Hardness (HB)	50... 66 N/mm ²	
Hardness (HB \perp)	25... 34 N/mm ²	
E-modulus ($E_b $)	Q. robur: 10000... 11700... 13200 N/mm ² Q. petraea: 9200... 13000... 13500 N/mm ²	



2 MDF, medium density fiberboard (black)



Tab. 2 A: Material data sheet, MDF, general⁴

Material group	Natural synthetic material; wood based panels; fiberboards
Name	Medium Density Fiberboard, MDF (GB, US); Mitteldichte Faserplatte, MDF (D)
Short name	MDF
Manufactured in	Germany; Poland
Origin of the wood	Austria, Belarus, Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Italy, Lithuania, Luxembourg, Netherlands, Norway, Poland, Slovenia, Spain, Switzerland, UK
Version	Black
Use	Predominantly for industrial furniture construction and interior finishing; MDF. LA, load-bearing, dry, service class It. EN 1995-1-1: 1; MDF. HLS, load-bearing purposes, moist, service class It. EN 1995-1-1: 1 and 2; MDF. RWH, sarking boards for roofing and walls, service class It. EN 1995-1-1

⁴ KALWEIT, A., a.o. (2012) - Handbook of Technical Product Design, Materials and Manufacturing - Decision Bases for Designers and Engineers (2) Berlin: Springer-Verlag Berlin Heidelberg GmbH

Tab. 2 B: Material data sheet, MDF, specific⁵⁶

General description

Certifications/Information	FSC, PEFC, E1 (EU), CARB (USA), CE	
Emission class	E1, CARB	
Fire resistance	Fire behavior: D-s2,d0 according to EN 13986 depending on end use (thickness: ≥9 mm/raw density: ≥600 kg/m ³)	
Length	2800 - 5600 mm	
Wide	2100 mm	
Thickness	10 - 25 mm	
Color	Anthracite to black, partly darker and lighter inlays	
Texture	Plain, fibrous mottled (top view), loose to very fine scatter (cross section)	

Basic materials

Wood chips	Predominantly spruce and pine, approx. 82 %.	
Binder	Synthetic binders; UMF adhesive (urea-melamine-formaldehyde resin), approx. 11 %.	
Water	ca. 5-7 %	
Kerosene wax emulsions	< 1 %	

Life cycle assessment data MDF, average (GER) 4,66

Resource input per kg A1-A3

Total non-renewable primary energy (PENRT)	13,09 MJ	2
Use of freshwater resources (FW)	0,0037 m ³	2

Environmental impact per m³ A1-A3

Global Warming Potential (GWP)	-0,088 Kg CO ₂ -eqv.	10
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Environmental impact Transport, per 1000 kgkm (720 kg/m³) 8,5

Production site: Germany, Poland/ZEITRAUM

Truck - ca. 1500 km A4 8

Total non-renewable primary energy (PENRT)	1812 MJ	
Use of freshwater resources (FW)	0,09582 m ³	
Global Warming Potential (GWP)	134,535 CO ₂ -eqv.	

Main raw material origin: Germany, Central Europe/production site

Truck - ca. 1500 km A4 9

Total non-renewable primary energy (PENRT)	1812 MJ	
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⁵ BMI 2021: Oekobaudat. Database <https://www.oekobaudat.de/no_cache/en/database/search.html> Accessed, on 10/27/2021

⁶ WEZEL, O. (2019) - Strength properties of wood-based materials according to DIN EN 622 <<http://www.tischler-ole-welzel.de/Holzwerkstoffe/Faserplatten%20nach%20DIN%20EN%2013986.pdf>> Accessed, on 09/03/2019

Use of freshwater resources (FW)	0,09582 m ³	
Global Warming Potential (GWP)	134,535 CO ₂ -eqv.	

Sustainability Assessment

Longevity	Very durable/moderately repairable (> 20 years)	9
Biological reproduction/ recycled material	90 %	9
Circulation potential	Only thermally recyclable	4
Socially compatible	Yes	10
Total average rating		7,52

Processing

Mechanical	Very good; can be sawed, drilled and milled with common machines	
Adhesion	Good	
Surface finishing	Moderately good; material tends to swell in combination with water, aqueous primers must therefore be intermediately sanded	

Durability

	By changing the synthetic binder or adding further additives, an increase in fire resistance, resistance to fungi and insects and moisture resistance can be achieved (see manufacturer's instructions)	
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Physical properties

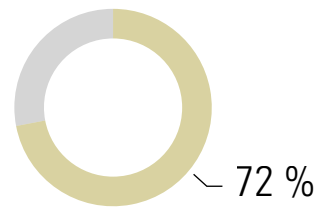
Bulk density according to EN 323	670... 730 kg/m ³	
Basis weight (18 mm)	12,1... 13,1 kg/m ²	
Material moisture at delivery	4 - 8 %	

Mechanical properties

Compressive strength (σ_{dB})	12 N/mm ²	
Flexural strength (σ_{bB})	21 N/mm ²	
Tensile strength ($\sigma_{zB} $)	12 N/mm ²	
Shear strength (τ_{aB})	6,5 N/mm ²	
E-modulus ($E_b $)	2900 N/mm ²	



3 Steel



Tab. 3 A: Material data sheet, steel, general⁷

Material group	Natural material; metals; transition metals
Parts origin	n.a.
Occurrence	Worldwide; South America, Western Australia, China and Eastern Europe, Canada
Use	According to application: building structural and tool steel, structural steel for machinery, vehicle and shipbuilding or mechanical engineering; line pipe, pressure vessel, etc.; handicraft and design; furniture making

⁷ KALWEIT, A., a.o. (2012) - Handbook of Technical Product Design, Materials and Manufacturing - Decision Bases for Designers and Engineers (2) Berlin: Springer-Verlag Berlin Heidelberg GmbH

Tab. 3 B: Material data sheet, steel, specific⁸⁹

General description

Certifications/Information	n.a.	
Emission class (formaldehyde)	Formaldehyde free	
Surface	smooth, hard	
Color	Grey	
Life cycle assessment data Steel profile, (GER)		5,33
Resource input per kg	A1-A3	
Total non-renewable primary energy (PENRT)	10,99 MJ	4
Use of freshwater resources (FW)	0,002314 m ³	4
Environmental impact per kg	A1-A3	
Global Warming Potential (GWP)	0,9944 Kg CO ₂ -eqv.	8
Environmental impact Transport, per 1000 kgkm (7850 kg/m³)		4
Production site: Europe/ZEITRAUM		
Truck ø - ca. 1500 km	A4	8
Total non-renewable primary energy (PENRT)	1812 MJ	
Use of freshwater resources (FW)	0,09582 m ³	
Global Warming Potential (GWP)	134 Kg CO ₂ -eqv.	
Main raw material origin: China/production location		0
Truck - ca. 2000 km	A4	
Total non-renewable primary energy (PENRT)	2416 MJ	
Use of freshwater resources (FW)	0,12776 m ³	
Global Warming Potential (GWP)	179,38 Kg CO ₂ -eqv.	
Container ship - ca. 10000 km	A4	
Total non-renewable primary energy (PENRT)	1094 MJ	
Use of freshwater resources (FW)	0,005636 m ³	
Global Warming Potential (GWP)	90,11 Kg CO ₂ -eqv.	

Sustainability Assessment

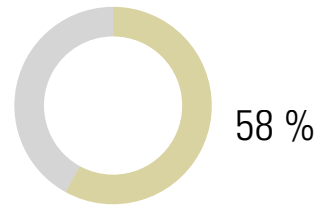
⁸ BMI 2021: Oekobaudat. Database <https://www.oekobaudat.de/no_cache/en/database/search.html> Accessed, on 10/27/2021

⁹ MATERIALARCHIV (2019) - Materialarchiv <<http://www.materialarchiv.ch/app-tablet/#search>> Accessed, on 03/01/2019

Longevity	Very durable/repairable (> 20 years)	10
Biological reproduction/ recycled material	50 - 60 %	6
Circulation potential	100 % (technological)	10
Socially compatible	Yes	8
Total average rating		7,22
Notes	The life cycle assessment of iron improves the more often the material has been recycled or the proportion of recycled material increases	



4 Aluminium



Tab. 4 A: Material data sheet, aluminum, general¹⁰¹¹

Material group	Synthetic material; metals; light metals
Name	Aluminium (GB, US); Aluminium (D)
Short name	Al
Occurrence	Worldwide; largest manufacturing country for aluminum is China
Use	(Lightweight construction); articles of daily use in the sports and leisure sector; sanitary and architectural sector; electrical engineering: conductor material; furniture and accessories sector; aluminum foil; chemical industry; construction industry

¹⁰ KALWEIT, A., a.o. (2012) - Handbook of Technical Product Design, Materials and Manufacturing - Decision Bases for Designers and Engineers (2) Berlin: Springer-Verlag Berlin Heidelberg GmbH

¹¹ BAUTABELLEN FÜR INGENIEURE , 21 Edition 2014, Bundesanzeiger Verlag GmbH, Cologne, Andrej Albert

Tab. 4 B: Material data sheet, aluminum,
specific¹²¹³

General description		
Certifications/Information	n.a.	
Emission class (formaldehyde)	Formaldehyde free	
Surface	Good reflectivity	
Color	Silvery	
Life cycle assessment data aluminum profile (GER)		0
Resource input per kg	A1-A3	
Total non-renewable primary energy (PENRT)	112,7 MJ	0
Use of freshwater resources (FW)	0,1017 m ³	0
Environmental impact per kg	A1-A3	
Global Warming Potential (GWP)	8,589 Kg CO ₂ -eqv.	0
Environmental impact Transport, per 1000 kgkm (640 kg/m³)		4
Production site: Europe/ZEITRAUM		
Truck ø - ca. 1500 km	A4	8
Total non-renewable primary energy (PENRT)	1812 MJ	
Use of freshwater resources (FW)	0,09582 m ³	
Global Warming Potential (GWP)	134 Kg CO ₂ -eqv.	
Main raw material origin: China/production site		0
Truck - ca. 2000 km	A4	
Total non-renewable primary energy (PENRT)	2416 MJ	
Use of freshwater resources (FW)	0,12776 m ³	
Global Warming Potential (GWP)	179,38 Kg CO ₂ -eqv.	
Container ship - ca. 10000 km	A4	
Total non-renewable primary energy (PENRT)	1094 MJ	
Use of freshwater resources (FW)	0,005636 m ³	
Global Warming Potential (GWP)	90,11 Kg CO ₂ -eqv.	
Sustainability Assessment		

¹² BMI 2021: Oekobaudat. Database <https://www.oekobaudat.de/no_cache/en/database/search.html> Accessed, on 10/27/2021

¹³ MATERIALARCHIV (2019) - Materialarchiv <<http://www.materialarchiv.ch/app-tablet/#search>> Accessed, on 03/01/2019

Longevity	Very durable/moderately repairable (> 20 years)	9
Biological reproduction/ recycled material	52 % (Europe as of 2021)	6
Circulation potential	70 - 99 % technological/recycling	8
Socially compatible	Yes	8
Total average rating		5,83

Processing

Mechanical	Very easy casting and forming (e.g. sand casting), bending, pressing, rolling, deep drawing and forging	
Joints	When welding, the use of a shielding gas such as argon or helium is recommended; simple joints by bonding with reactive adhesives such as epoxy resin or polyurethane; stable bonds result from light roughening of the bonding surface	
Surface finishing	Easy to grind and polish (fix with clear varnish); for colored surfaces due to the anodizing process	
Other	When exposed to air, aluminum forms a thin oxide layer on the surface. It protects the metal from corrosion and weathering	
Durability	Weather resistant; more corrosion resistant than iron	

Physical properties

Density	2,7 g/cm ³	
Mohs hardness	2,75	
Magnetism	paramagnetic	
Electrical conductivity	37,7*10 ⁶ S/m	
Thermal Abrasiveness	237 W/(m*K)	

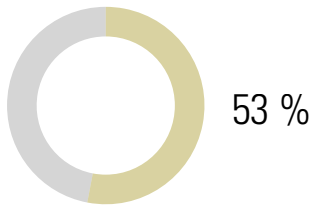
Mechanical properties aluminum (alloys) for sheets and profiles

Yield strength (βs)	90 - 250 N/mm ²	
Tensile strength (βz)	120 - 400 N/mm ²	
Elongation at break	5 - 20 %	
E-modulus (E)	70*10 ³ N/mm ²	
Shear modulus (G)	27*10 ³ N/mm ²	
Poisson's ratio	0,3	

Notes

Aluminum production is very energy-intensive. Only about 1 % of this energy is needed to produce a comparable quantity of copper. A positive aspect is the good recyclability; aluminum has a neutral taste and is approved for contact with food

5 Varnish



Tab. 5 A: Material data sheet, lacquer, general¹⁴¹⁵

Material group	Synthetic material; coating materials; varnish
Name	varnish (GB, US); Lack (D)
Manufacturer	ADLER-Werk Lackfabrik Johann Berghofer GmbH & Co KG
Manufactured in	Germany (GER)
Version	ADLER PUR-Antiscratch HQ
Use	For the varnishing of heavily stressed surfaces in furniture and interior finishing, for hotel and school furnishings, for kitchen and sanitary furniture: areas of use II - IV according to ÖNORM A 1610-12

¹⁴ KALWEIT A. (2012) - Handbook of technical product design - materials and manufacturing. Berlin: Springer Verlag

¹⁵ ADLER (2019) - ADLER PUR-Antiscratch HQ <<https://www.adler-lacke.com/de>> Accessed, on 02/03/2019

Tab. 5 B: Material data sheet, paint, specific¹⁶¹⁷

General description

Certifications/Information	ISO 9001, ISO 14001, ISO 50001, A+ (see VOC's), CP65, DIN 4102 B1	
Emission class (formaldehyde)	Formaldehyde-free	
VOC's	approx. 72 % volatile components emitted during curing) French regulation DEVL1104875A on the labeling of construction coating products for their emissions of volatile pollutants: A+	
Delivery forms	Liquid	
Color	Transparent, colorless	
Texture	Glossy to matt (cured)	

Life cycle assessment data n.a. (GER) 5

Resource input per kg	A1-A3	
Total non-renewable primary energy (PENRT)	n.a.	
Use of freshwater resources (FW)	n.a.	
Environmental impact per kg	A1-A3	
Global Warming Potential (GWP)	n.a.	

Environmental impact Transport, per 1000 kgkm 9

Production site: Germany/ZEITRAUM

Truck - ca. 200 km	A4	10
Total nicht erneuerbare Primärenergie (PENRT)	172,12 MJ	
Einsatz von Süßwasserressourcen (FW)	0,012106 m ³	
Global Warming Potential (GWP)	12,822 Kg CO ₂ -eqv.	

Main raw material origin: n.a./production site

n.a. - ø 3000 km	A4	8
Total nicht erneuerbare Primärenergie (PENRT)	3624 MJ	
Einsatz von Süßwasserressourcen (FW)	0,19164 m ³	
Global Warming Potential (GWP)	296,07 Kg CO ₂ -eqv.	

Sustainability Assessment

Longevity	Very durable/moderately repairable (> 20 years)	9
Biological reproduction/ recycled material	0 %	0
Circulation potential	Hazardous waste	0

¹⁶ BMI 2021: Oekobaudat. Database <https://www.oekobaudat.de/no_cache/en/database/search.html> Accessed, on 10/27/2021

¹⁷ MATERIALARCHIV (2019) - Materialarchiv <<http://www.materialarchiv.ch/app-tablet/#search>> Accessed, on 03/01/2019

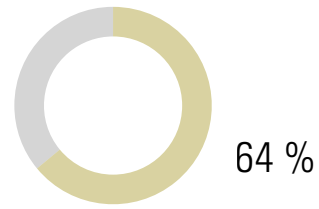
Socially compatible	Yes	9
Total average rating		5,33

Processing

Apply	Spray gun	
Storage	Can be stored up to 5 years with tight closure	
Notes	For hardly combustible or hardly flammable superstructures	



6 PVAc dispersion adhesive, D3



Tab. 6 A: Material data sheet, PVAc dispersion adhesive, D3, general¹⁸¹⁹

Material group	Synthetic material; adhesives; dispersion adhesives
Name	Dispersion Adhesive (GB, US); Dispersionsklebstoff, PVAc-(Polyvinylacetat) Klebstoffe, Weißleim (D)
Manufacturer	Kleiberit Klebstoffe GmbH
Manufactured in	Germany (GER)
Version	Kleiberit 303, D3-adhesive
Use	Furniture construction; especially for interiors; staircase construction, ship interior finishing; surface bonding of HWS; door and window production

¹⁸ KALWEIT A. (2012) - Handbook of technical product design - materials and manufacturing. Berlin: Springer Verlag

¹⁹ KEIBERIT (2019) - KLEIBERIT 303, D3, PVAc Adhesive <https://interior-construction.kleiberit.com/fileadmin/Content/Documents/DE/Infoblaetter/303_D3_Leim_D.pdf> Accessed, on 02/03/2019

Tab. 6 B: Material data sheet, PVAc dispersion adhesive, D3, specific²⁰²¹

General description

Certifications/Information	ISO 9001, ISO 14001, ISO 50001	
Emission class (formaldehyde)	Formaldehyde-free	
Delivery forms	Liquid	
Color	Whitish (transparent in cured form)	
Texture	Glossy	

Life cycle assessment data Dispersion-based solvent-free adhesives, coatings and sealants (GER) 10

Resource input per kg A1-A3

Total non-renewable primary energy (PENRT)	26,7 MJ	10
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Use of freshwater resources (FW)	0,00758 m ³	10
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Environmental impact per kg A1-A3

Global Warming Potential (GWP)	0,955 Kg CO ₂ -eqv.	10
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Environmental impact Transport, per 1000 kgkm 6,5

Production site: Germany/ZEITRAUM

Truck - ca. 200 km A4 10

Total non-renewable primary energy (PENRT)	172,12 MJ	
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Use of freshwater resources (FW)	0,012106 m ³	
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Global Warming Potential (GWP)	12,822 Kg CO ₂ -eqv.	
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Main raw material origin: n.a./production site

n.a. - ø > 7000 km A4 3

Total non-renewable primary energy (PENRT)	8456 MJ	
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Use of freshwater resources (FW)	0,44716 m ³	
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Global Warming Potential (GWP)	627,83 Kg CO ₂ -eqv.	
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Sustainability Assessment

Longevity	Very durable/moderately repairable (> 20 years)	9
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Biological reproduction/ recycled material	0 %	0
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Circulation potential	Only thermally recyclable	4
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Socially compatible	Yes	9
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²⁰ BMI 2021: Oekobaudat. Database <https://www.oekobaudat.de/no_cache/en/database/search.html> Accessed, on 10/27/2021

²¹ MATERIALARCHIV (2019) - Materialarchiv <<http://www.materialarchiv.ch/app-tablet/#search>> Accessed, on 03/01/2019

Total average rating**6,41****Processing**

Adhesion	With brush, spatula or glue roller	
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Properties

Density	1,1 g/cm ³	
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PH level	3	
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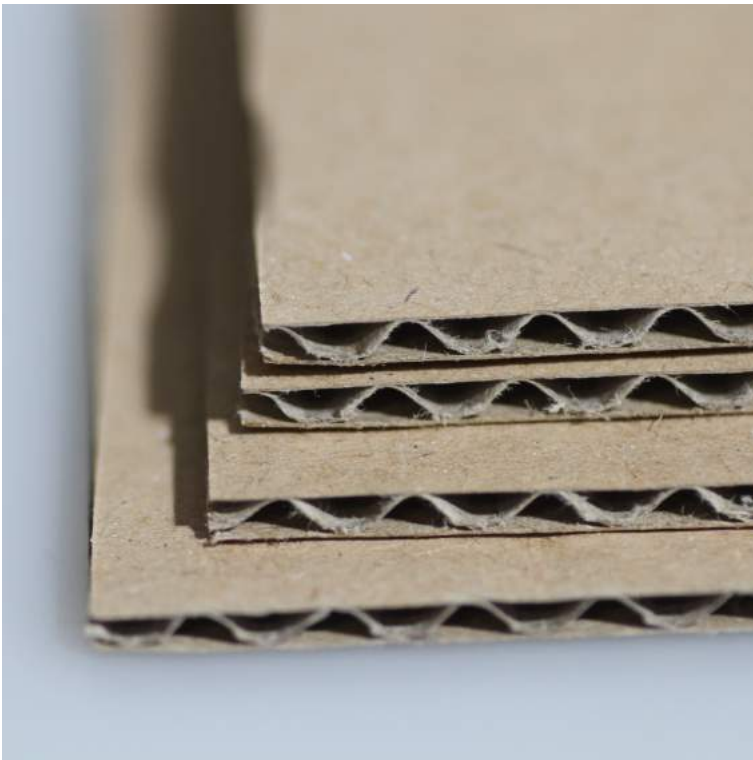
Consistency	Medium viscosity	
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Moisture resistance	D3	
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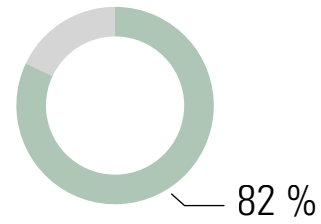
Heat resistance	Up to 120 °C	
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Notes

PVAc adhesive is available solvent-free and solvent-based	
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7 Cardboard, beds, tables & storage



Tab. 7 A: Cardboard, beds, tables & storage, general

Material group	Packaging
Name	Cardboard (GB, US); Karton (D)
Manufacturer	Monowell GmbH & Co. KG
Manufactured in	Germany (GER)
Use	Packing material for individual wrapping of the furniture

Tab. 7 B: Cardboard, beds, tables & storage, specific²²²³

General description

Certifications/Information	ISO 9001, ISO 50001, ISO 22000 DE, ISO 22000 EN, FSC	
Color	Brown	
Texture	matt	
Contents		
60 %	Recycled paper	
40 %	Primary raw material	

Life cycle assessment data „Kraftpapier“ (GER) 10

Resource input per kg	A1-A3	
Total non-renewable primary energy (PENRT)	5,888 MJ	
Use of freshwater resources (FW)	0,004899 m ³	

Environmental impact per kg	A1-A3	
Global Warming Potential (GWP)	-0,8973 Kg CO ₂ -eqv.	

Environmental impact Transport, per 1000 kgkm 9

Production site: Germany/ZEITRAUM

Truck - ca. 200 km	A4	10
Total non-renewable primary energy (PENRT)	172,12 MJ	
Use of freshwater resources (FW)	0,012106 m ³	
Global Warming Potential (GWP)	12,822 Kg CO ₂ -eqv.	

Main raw material origin: Germany, Central Europe/Production site

Truck - ca. 1500 km	A4	8
Total non-renewable primary energy (PENRT)	1812 MJ	
Use of freshwater resources (FW)	0,09582 m ³	
Global Warming Potential (GWP)	134,535 Kg CO ₂ -eqv.	

Sustainability Assessment

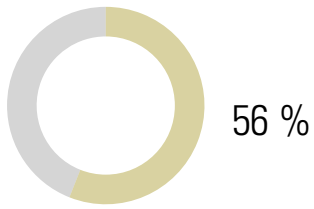
Longevity	Moderately durable/repairable (< 10 years)	4
Biological reproduction/ recycled material	60 %	6
Circulation potential	100 % (technological)	10

²² BMI 2021: Oekobaudat. Database <https://www.oekobaudat.de/no_cache/en/database/search.html> Accessed, on 10/27/2021

²³ MATERIALARCHIV (2019) - Materialarchiv <<http://www.materialarchiv.ch/app-tablet/#search>> Accessed, on 03/01/2019

Socially compatible	Yes	10
Total average rating		8,16
Disposal note	Waste paper	

8 Polyester fleece



Tab. 8 A: Material data sheet, polyester fleece, general

Material group	Packaging
Name	Polyester fleece (GB); Polyestervlies (D)
Material abbreviation	PES
Manufactured in	Germany (GER)
Use	Packing material for protection

Tab. 8 B: Material data sheet, polyester fleece, specific²⁴²⁵

General description

Certifications/Information	n.a.	
Delivery form	Mats, wadding, etc.	
Texture	soft, fibrous	
Life cycle assessment data Comparative material for PE wadding (no data available) - PE nonwoven (GER)		3
Resource input per kg	A1-A3	
Total non-renewable primary energy (PENRT)	22 MJ	
Use of freshwater resources (FW)	0,00252 m ³	
Environmental impact per kg	A1-A3	
Global Warming Potential (GWP)	0,73 Kg CO ₂ -eqv.	
Environmental impact Transport, per 1000 kgkm (approx. 0.5 kg/m²)		6,5
Production site: Germany/ZEITRAUM		
Truck - ca. 500 km	A4	10
Total non-renewable primary energy (PENRT)	430,3 MJ	
Use of freshwater resources (FW)	0,030265 m ³	
Global Warming Potential (GWP)	32,055 Kg CO ₂ -eqv.	
Main raw material origin: n.a./production site		3
n.a. - ø > 7000 km	A4	
Total non-renewable primary energy (PENRT)	8456 MJ	
Use of freshwater resources (FW)	0,44716 m ³	
Global Warming Potential (GWP)	627,83 Kg CO ₂ -eqv.	
Sustainability Assessment		
Longevity	Durable (10 - 20 years)	5
Biological reproduction/ recycled material	0 %	0
Circulation potential	100 % (technological)	10
Socially compatible	Yes	9
Total average rating		5,58

²⁴ BMI 2021: Oekobaudat. Database <https://www.oekobaudat.de/no_cache/en/database/search.html> Accessed, on 10/27/2021

²⁵ MATERIALARCHIV (2019) - Materialarchiv <<http://www.materialarchiv.ch/app-tablet/#search>> Accessed, on 03/01/2019

Disposal note

Recyclable waste

Information on all materials used by ZEITRAUM
can be found in our material library at:

www.zeitraum-moebel.com

Important note: Our Furniture Footprint product data sheets have no scientific claim and are to be understood as a guide for our customers and us. All data are marked with corresponding source information. The contents of our Furniture Footprint product database have been compiled with the utmost care. However, we do not guarantee the accuracy, completeness and timeliness of the content, so we do not assume any liability for incorrect, outdated or incomplete information.