



# Environmental product declaration

according to ISO 14025 and EN 15804

**wiesner hager** concept

Seating for public areas, acc. to EN 16139, EN 1022, EN 1728 and  
DIN 4573

aluform\_3 Stacking chair

- ✓ CRITERION 1: ISO 14025 TYPE III
- ✓ CRITERION 2: BASED ON ISO 14040
- ✓ CRITERION 3: BASED ON ISO 14044





**Environmental Product Declaration**  
**EPD**

Design: arge2

<p>Wiesner-Hager Möbel GmbH Linzer Straße 22 A-4950 Altheim Tel. 0043 7723 460-0 <a href="http://www.wiesner-hager.com/en/">http://www.wiesner-hager.com/en/</a></p>	<b>Manufacturer Declaration holder</b>
TA 22012 1634 6430-101 03297740410	<b>EPD number</b>
6430-101 aluform_3 aluform_3 Stacking chair	<b>Declared product</b>
This declaration was compiled according to ISO 14025 and EN 15804 type B. It describes the environmental rating of the listed product and gives the possibility to compare it with other similar products.	<b>Purpose</b>
The content of this declaration is based on the results of the operational life cycle assessment, according to EN ISO 14040/44 of the fiscal year 2022/23. The used generic data comes from acknowledged life cycle management databases and current EPD's of the declaration holders upstream products and are calculated using the CML method. <a href="https://www.wiesner-hager.com/en/about-us/sustainability/life-cycle-assessment/">https://www.wiesner-hager.com/en/about-us/sustainability/life-cycle-assessment/</a>	<b>Data origin</b>
The procedure to compile this declaration was audited on 14 th September 2023 by TÜV Austria GmbH.	<b>Auditing</b>
Dipl.-Ing. Dr. Jürgen Hain, TÜV Austria GmbH, Wien	<b>Auditor</b>
By means of the certificate TA 22012 1634 from 26 th September 2023, TÜV Austria GmbH authorizes the declaration holder to generate EPD type III. <a href="#">Download certificate</a>	<b>Certification</b>
The certificate is valid until 30 th September 2026. The compliance of the requirements will be ensured by annual, internal and external evaluations.	<b>Validity</b>
Gerhard Steigthaler, Master of Science, environmental engineer	<b>Issuer</b>
29. February 2024	<b>Date of issue</b>

<p>This declaration includes</p> <ul style="list-style-type: none"> <li>- Pictures, descriptions and fulfilled standards</li> <li>- Information about life cycle assessment</li> <li>- Specific characteristics of the product configuration</li> <li>- Indicators of the life cycle and impact assessment</li> <li>- Details on the material composition of the product</li> <li>- Information about material certificates of the used raw materials</li> <li>- Recycling potentials</li> </ul>	<b>Content</b>																																																									
<p>The assessment of the declared product covers the whole lifecycle process from raw materials, manufacturing and disposal, including all transportation. The anticipated lifespan of the product is 15 years, assuming the product is used in line with the manufacturer's guidance and for the application it was designed and intended. As a result of the high product quality, no repairs are expected during the lifetime and no environmental impact is anticipated. All recycling is carried out in line with European standards. Component parts are separated and recycled accordingly and any remaining waste material is incinerated under strict controls for the generation of energy. All transport distances including those of our suppliers and subcontractors are considered; all distances are calculated using route planning software. The distance between the declaration holder and the end user is 500 km, the average distance between the end user and the waste management company is calculated at 50 km.</p>	<b>Investigation frame</b>																																																									
<p>The standard EN 15804 describes the basic rules for the preparation of environmental product declarations for building materials. Furniture are still irrelevant for sustainability certifications of buildings, however we try to assign the high transparency of this standard to our furniture as far as possible. The following lifecycles are considered in this document:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Phase</th> <th style="text-align: left;">Name of lifecycle</th> <th style="text-align: left;">relevant</th> </tr> </thead> <tbody> <tr><td>A1</td><td>raw material supply and processing</td><td>yes</td></tr> <tr><td>A2</td><td>transportation to the manufacturer of precursor products</td><td>yes</td></tr> <tr><td>A3</td><td>production of precursor products</td><td>yes</td></tr> <tr><td>A4</td><td>transportation to building site</td><td>no</td></tr> <tr><td>A4</td><td>transportation of the product to the end user *)</td><td>yes</td></tr> <tr><td>A5</td><td>manufacturing of the product **)</td><td>yes</td></tr> <tr><td>B1</td><td>use of the product ***)</td><td>no</td></tr> <tr><td>B2</td><td>maintenance</td><td>no</td></tr> <tr><td>B3</td><td>repair</td><td>no</td></tr> <tr><td>B4</td><td>substitute</td><td>no</td></tr> <tr><td>B5</td><td>renovation</td><td>no</td></tr> <tr><td>B6</td><td>energy consumption for technical building equipment</td><td>no</td></tr> <tr><td>B7</td><td>water consumption for technical building equipment</td><td>no</td></tr> <tr><td>C1</td><td>demolition</td><td>no</td></tr> <tr><td>C2</td><td>transportation to waste treatment</td><td>yes</td></tr> <tr><td>C3</td><td>waste treatment</td><td>yes</td></tr> <tr><td>C4</td><td>landfilling</td><td>yes</td></tr> <tr><td>D</td><td>recycling potential</td><td>yes</td></tr> </tbody> </table> <p>*) Acc. to EN 15804 the modul A4 describes the transport of the building materials to building site, here it stands for the transport of furniture to the end user</p> <p>**) Acc. to EN 15804 the modul A5 describes the installation of building materials into the building, here it stands for the manufacturing of the furniture at the factory</p> <p>***) The use of our furniture has no relevant environmental effects</p>	Phase	Name of lifecycle	relevant	A1	raw material supply and processing	yes	A2	transportation to the manufacturer of precursor products	yes	A3	production of precursor products	yes	A4	transportation to building site	no	A4	transportation of the product to the end user *)	yes	A5	manufacturing of the product **)	yes	B1	use of the product ***)	no	B2	maintenance	no	B3	repair	no	B4	substitute	no	B5	renovation	no	B6	energy consumption for technical building equipment	no	B7	water consumption for technical building equipment	no	C1	demolition	no	C2	transportation to waste treatment	yes	C3	waste treatment	yes	C4	landfilling	yes	D	recycling potential	yes	<b>System boundaries</b>
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The general information of the LCA refers to whole lifecycle, beginning with the raw material make, the manufacturing of the product until the disposal of <i>one</i> unit of the product with an anticipated lifespan of 15 years. But the division of impact factors with the masses of the product allows also a specific statement in mass.	<b>Functional unit</b>
Seating for public areas, acc. to EN 16139, EN 1022, EN 1728 and DIN 4573	<b>Application</b>
6430-101 aluform_3 aluform_3 Stacking chair, seat upholstered, back plywood	<b>Identification of product</b>
Originally launched as a chair for use in cafeterias, the design of aluform has undergone many improvements over the years. The latest version aluform_3, is a contemporary redesign that moves away from the severity of the classic towards a more modern aesthetic without losing the important features of the original. aluform_3 is the ideal seating option, whether used individually or in rows, for meeting and conference rooms, canteens and large halls.	<b>Description of product</b>
cover 1 fabric S3140 plain black; colour of wood B02 natural beech; colour of metal chrome; leg finish plastic glides	<b>Configuration of</b>

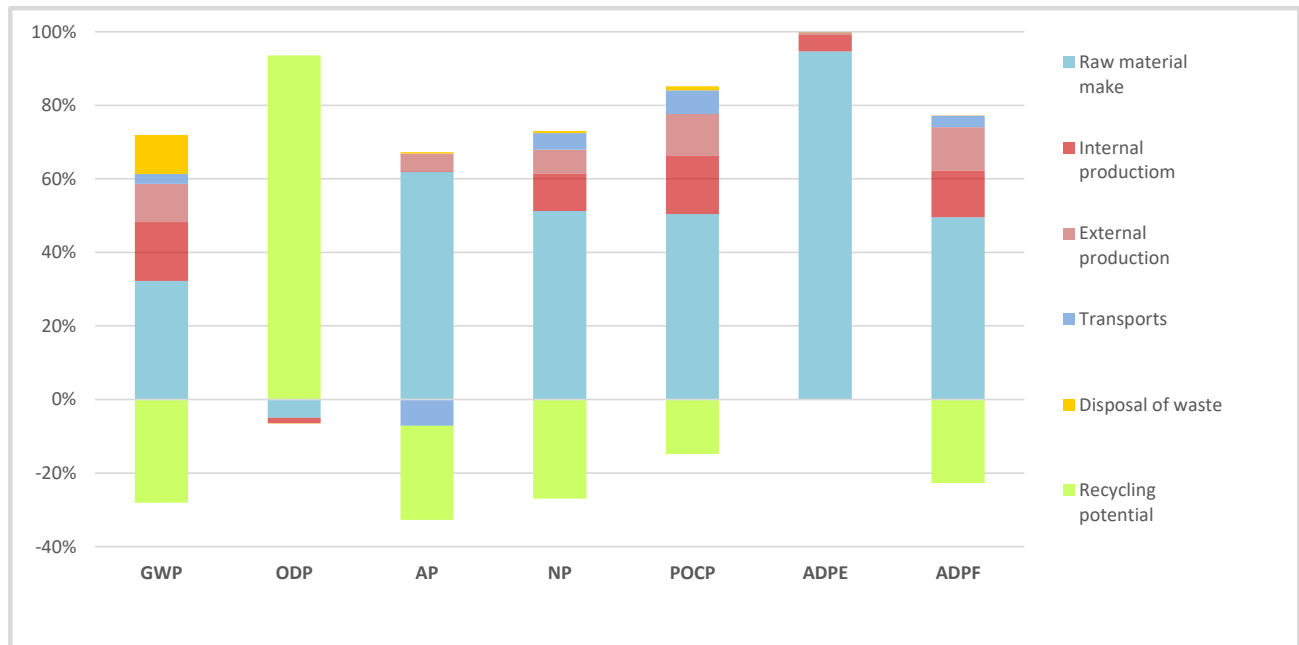
#### Eco-balance indicators

LCA Indicators		Global warming GWP	Ozone depletion ODP	Acidification AP	Nutritification NP	Ozone creation POCP	Abiotic resources ADPE
		CO2 eq.	CCl3F eq.	SO2 eq.	PO4-3 eq.	C2H4 eq.	Sb eq.
Lifecycle		(kg)	(mg)	(g)	(g)	(g)	(g)
Raw material make	A1-A3	14,15	0,03	6,47	49,42	6,32	1,30
Transportation	A4	0,85	0,00	-0,49	3,59	0,63	0,00
Internal production	A5	6,99	0,01	0,02	9,66	1,97	0,06
Sub-contracting	A5	4,47	0,00	0,5	6,25	1,40	0,00
Transport to the end user	A4	0,30	0,00	-0,23	0,69	0,16	0,00
Waste treatment	C2-C4	4,69	0,00	0,00	0,63	0,16	0,00
Recycling potential	D	-12,30	-0,64	-2,68	-25,98	-1,86	0,00
<b>Total</b>		<b>19,15</b>	<b>-0,59</b>	<b>3,60</b>	<b>44,26</b>	<b>8,78</b>	<b>1,36</b>

Use of resources		Abiotic fossil fuels	Primary energy renewable		Primary energy fossil		Use recycled fibre
			energy carrier	material use	energy carrier	material use	
Lifecycle		ADPF	PERE	PERM	PENRE	PENRM	SM
		(MJ)	(MJ)	(MJ)	(MJ)	(MJ)	(kg)
Raw material make	A1-A3	250,64	134,68	68,15	237,71	31,77	1,02
Transportation	A4	11,23	0,63	0,00	11,26	0,00	0,00
Internal production	A5	64,31	53,04	0,12	62,68	1,00	0,01
Sub-contracting	A5	58,66	22,97	0,00	65,76	0,00	0,00
Transport to the end user	A4	4,01	0,24	0,00	4,03	0,00	0,00
Waste treatment	C2-C4	0,90	0,19	-39,45	26,22	-27,80	0,00
Recycling potential	D	-115,09	49,56	0,00	-126,14	0,00	0,00
<b>Total</b>		<b>274,66</b>	<b>261,32</b>	<b>28,82</b>	<b>281,53</b>	<b>4,97</b>	<b>1,03</b>

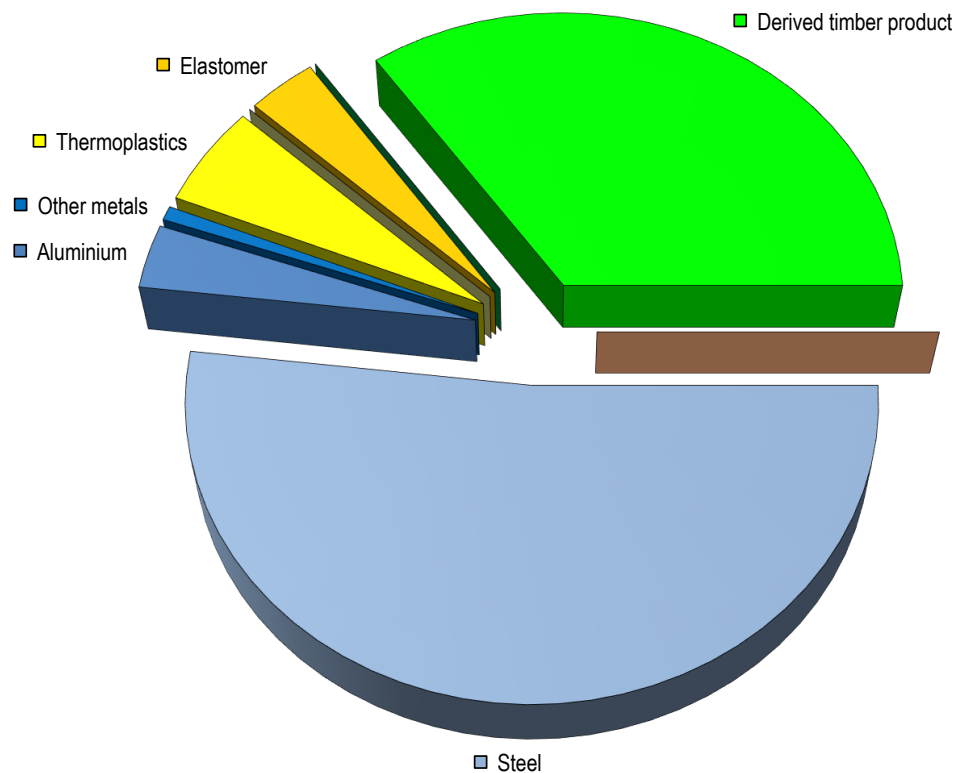
Use of resources / waste		Recycled fuels		Use sweetwater resources	Waste		
		renewable	fossil		dangerous waste site	no dangerous	radioactive waste
Lifecycle		(RSF)	(NRSF)	FW	(HWD)	(NHWD)	(RWD)
		(MJ)	(MJ)	(m³)	(kg)	(kg)	(kg)
Raw material make	A1-A3	0,00	0,00	0,07	0,00	0,93	0,01
Transportation	A4	0,00	0,00	0,00	0,00	0,00	0,00
Internal production	A5	0,00	0,00	0,06	0,00	0,09	0,00
Sub-contracting	A5	0,00	0,00	0,01	0,00	0,21	0,00
Transport to the end user	A4	0,00	0,00	0,00	0,00	0,00	0,00
Waste treatment	C2-C4	0,00	0,00	0,00	0,00	0,47	0,00
Recycling potential	D	34,65	0,00	0,00	0,01	-0,61	-0,01
<b>Total</b>		<b>34,65</b>	<b>0,00</b>	<b>0,15</b>	<b>0,01</b>	<b>1,10</b>	<b>0,00</b>

### Impact contribution



Material composition			Recycling content			
Materials	Weight	Share	material	energetic	disposal	[ ]
Steel	4,092	51,7%	4,010	0,000	0,082	kg
Aluminium	0,276	3,5%	0,270	0,000	0,006	kg
Other metals	0,061	0,8%	0,060	0,000	0,001	kg
Thermoplastics	0,444	5,6%	0,030	0,370	0,044	kg
Duromer						
Elastomer	0,277	3,5%	0,000	0,261	0,016	kg
Laminated plastics						
Wood-Plastic Composites						
Solid wood						
Derived timber product	2,746	34,7%	0,000	2,724	0,022	kg
Paper, -board						
Leather						
Other renewable materials						
Glass						
Other mineral materials						
Laquer and adhesives	0,014	0,2%	0,000	0,012	0,001	kg
Chemicals						
Auxiliaries						
<b>Total</b>	<b>7,909</b>	<b>100,0%</b>	<b>4,370</b>	<b>3,367</b>	<b>0,172</b>	<b>kg</b>

### Material composition



The proportion of secondary raw material in this product is 25%. It includes 34,7% renewable materials.

## Use of laquer and adhesives

Application	Chemical characterisation	Weight <sup>1</sup>	VOC <sup>2</sup>	Classific. <sup>3</sup>
Wood glues	-	-	-	-
Hotmelt adhesives	-	-	-	-
Fabric glues	-	-	-	-
Assembly adhesives	-	-	-	-
Stains	-	-	-	-
Water-based varnish	Water-based acrylic lacquer	0,036 kg	1,0%	no
Powder coatings	-	-	-	-
Solvent-based varnis	-	-	-	-

The product is free of halogenated plastics (PVC).

<sup>1</sup> dry matter

<sup>2</sup> uncured

<sup>3</sup> acc. EG Reg. No 1272/2008

## Material certificates

The following certificates are valid only for the mentioned raw-materials but not for the final product:

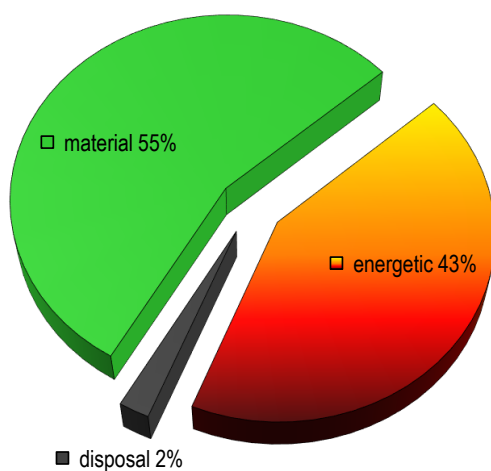
Shaped plywood: FSC Standard - certificate SA-COC-003859, licence FSC-C114335

Upholstery fabric: Oeko-Tex Standard100 - certificate 073313.O, product class II

Foam rubber parts: Oeko-Tex Standard100 - certificate 17.0.22215, product class I



## Recycling rate (EoL)



The chart shows the presently usual recycling rate in Western Europe, based on the used material mix.

The thermal recycling will release energy to the amount of 68 MJ. This is equivalent to 1,9 litre of light fuel oil.

The remaining ash from the incineration will be disposed of in a landfill.

## Publisher and picture credits

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**wiesner hager** concept

## Certification

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## Specialist counselling

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