

Soundproof door leaf - GTB 100

Self-declaration according to DIN EN ISO 14021

Declaration holder: Lindner SE | Bahnhofstraße 29 | 94424 Arnstorf | Germany

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DGNB, LEED, Cradle to Cradle, PCDS

Product information

Product description

Soundproof door leaf GTB 100

The GTB 100 internal door element is an aluminium tubular frame door leaf with safety glass panes glued on both sides.

The door leaf thickness is 100 mm.

Scope of application

Contract construction, e.g. office and conference rooms, industrial and work rooms as well as training and research rooms.

Base materials

Base materials per door leaf 0.959 m x 2.124 m with single glazing

System components	Material	Weight proportions [%]
		43 dB
ESG pane	Glass	~74.0
Glazing frame	Aluminium	~ 23.0
Corner connector	Aluminium	~ 1.2
Shims	Wood	< 0.05
Adhesive tape	Acrylic	< 0.5
Screws	Stainless steel	< 0.5
Rivets	Steel	< 0.5

Accessories such as handles, hinges and locks are provided by suppliers. If available, the sustainability data sheets from the manufacturer can be enclosed for the accessories.

Material explanation

Glass

ESG, single-pane safety glass

VSG, laminated safety glass

Aluminium

Extruded aluminium profiles, are coated (powder-coated, or anodised), cut to size and assembled into a frame with screws and corner connectors.

Steel

Steel is the name given to metallic alloys whose main component is iron and whose carbon content is between 0.02 % and 2.06 %.

Green Building Information



Green Building Statement

We already think in terms of closed cycles when developing our products. For years, we have been one of the specialists in the field of sustainable building. Accompanied by our internal specialist department "Green Building", we ensure the sustainability goals of your building project. The consideration of the sustainability of the product focuses on the carbon footprint, as well as circular and healthy building.

LinLoop: Circular business models

With our sustainable business models, we bring the circular economy into practice! Adapted to the German, Austrian and Swiss markets, with LinLoop we offer flexible rental and return options that combine economic, ecological and social factors. In doing so, we ensure careful use of our resources and at the same time enable the individual design of sustainable working environments.



Carbon footprint

Under this section, the amount of carbon dioxide emissions produced during each stage of the product's life is presented. The Global Warming Potential (GWP) is given as CO₂ equivalent and describes the contribution of a substance to the warming of the air layers near the ground (greenhouse effect). This is considered in relation to the global warming potential of CO₂. The lower this value, the lower the associated environmental impact.

A carbon footprint in accordance with DIN EN ISO 14067 can be produced for the GTB 100 sound insulating door leaf on request.



Circular construction

By implementing the closed-loop concept, we avoid waste, toxic substances and environmental pollution. The section presents the following topics: recyclable materials, the use of regenerative forms of energy, the responsible use of water, the adaptability of the product during use and also the recyclability after disassembly.



Healthy construction

The chapter presents the aspects of healthy building, from the choice of pollutant- and emission-free materials in the product to the well-being of the user.

Certification systems and evidence

The sound insulation door leaf is suitable to contribute to the requirements of the building certifications DGNB, LEED etc..In the listed credits, the door leaf contributes to achieving the points or required quality levels. Information on circularity can be found in the "Product Circularity Data Sheet".

PRODUCTION AND ASSEMBLY



Carbon footprint

The following table shows the Global Warming Potential for the production stage, which includes modules A1 (provision of raw materials), A2 (transport) and A3 (manufacture). The construction stage includes transport from the manufacturer to the place of use (A4) and assembly (A5).

Parameter	Unit	A1-A3 Product Stage	A4 Transport from the gate to the site	A5 Assembly
GWP	[kg CO ₂ -eq./m ²]	N/A	N/A	N/A



Circular construction

With a water circulation concept, water consumption is systematically reduced. The necessary process water can circulate in the circuit due to sedimentation and cleaning of the solids.

Waste that cannot be avoided during production is fed into recycling processes via specialist disposal companies.

The pre- and post-consumer recycling shares of the components can be seen in the following table.

Components	Weight share [%]	Recycling share [%]		Production site
		Pre-Consumer	Post-Consumer	
ESG /VSG pane	~ 74.0	20	5	Arnstorf
Glazing frame	~ 23.0	0	30	Arnstorf
Corner connector	~ 1.2	0	30	Arnstorf
Other	~ 1.8	0	0	Arnstorf

Pre-consumer: waste from industrial processing; post-consumer: waste after use by end consumers



Healthy construction

Due to its modular construction, the door leaf contributes to a low-waste, low-noise and low-dust construction site.

As a manufacturer of articles, Lindner fulfils the obligations towards the EU chemicals directive "REACH" and has drawn up its own REACH declaration.

The aim of the **REACH Regulation** (Registration, Evaluation and Authorisation of **C**hemicals) is to ensure that substances produced and used in the EU are recorded and their effects on health and the environment are identified and recorded.

Components	Weight share [%]	VOC	GISCODE/ EMICODE	Other
Glazing frame	~ 23.0	-	-	Without lead, mercury, Cadmium and chromium (VI) compounds
Corner connector	~ 1.2	-	-	Without lead, mercury, Cadmium and chromium (VI) compounds
Adhesive tape	< 0.5	-	-	-
Screws	< 0.5	-	-	Without lead, mercury, Cadmium and chromium (VI) compounds
Rivets	< 0.5	-	-	Without lead, mercury, Cadmium and chromium (VI) compounds

USE



Carbon Footprint

The soundproof door leaf does **not** cause any environmental impact during use. The door does not need to be maintained and no repairs or replacements are to be expected if it is used correctly. To ensure correct use, instructions for use, maintenance and care are provided to the service providers carrying out the work.

Parameter	Unit	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Energy use	B7 Water use
GWP	[kg CO ₂ - eq./m ²]	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Circular construction

The useful life of glass doors is more than 50 years (according to BBSR table, code no. 344.211, as of 02/2017, published by the Bauinstitut für Bau-, Stadt- und Raumforschung).

If used properly, there are no costs for maintenance, repair or replacement during this time. However, each of the door leaves can be removed, relocated and replaced individually if necessary. If necessary, the product can be serviced and repaired by trained personnel at the product's place of use. Spare parts are provided by the manufacturer during the service life of the product



Healthy construction

Test chamber measurement according to requirements of the Eurofins Indoor Air Comfort® GOLD quality mark (e.g. AgBB measurement scheme):

TVOC: after 28 days 160 µg/m³

Formaldehyde value : after 28 days < 3 µg/m³

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This means that the requirements for Indoor Air Comfort® can be met.

The Lindner GTB 100 can be designed as a single-leaf element with a sound reduction index according to ISO 717-1 of up to R_w = 45 dB* and thus protects rooms from penetrating sound.

*This self-declaration refers to the 43 dB version.

DISASSEMBLY



Carbon footprint

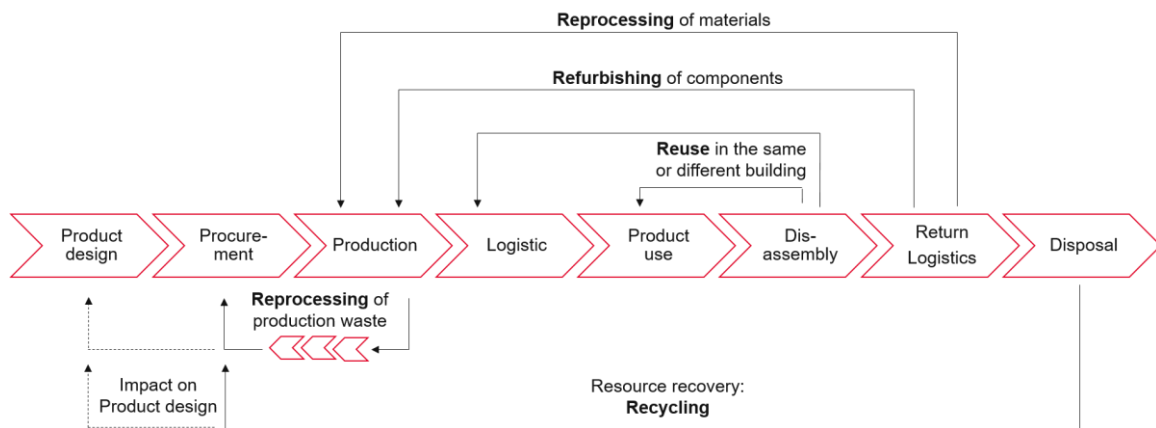
The partial footprint for the disposal stage includes the modules C1-C4. Deconstruction and demolition of the product from the building (C1), transport to treatment (C2), waste processing (C3) and disposal (C4). The reuse, recovery or recycling potential is considered in module D.

Parameter	Unit	C1 Deconstruction/ demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse potential
GWP	[kg CO ₂ - eq./m ²]	N/A	N/A	N/A	N/A	N/A



Circular construction

The glass door is characterised by its recyclability. Our recycling options are the reuse or reprocessing of the product or its components, as well as the recovery and recycling of the materials.



Reuse:

Through a single and non-destructive disassembly of the glass door, the system can be easily reused. The reuse of the product can then take place in the same or in another building.

Refurbishing:

In order to improve the functionality and aesthetics, it is possible to refurbish the glazing. Accessories such as handles, locks, hinges etc. can be replaced.

Reprocessing:

In addition, the glass door is highly recyclable. After the components have been separated according to type, they can be reprocessed.

Recycling:

After separation by type, the materials can enter an external recycling circuit.



Healthy construction

Since the door leaf can be dismantled non-destructively, the disassembly is dust and noise reduced.

BUILDING CERTIFICATION DGNB 2023

The certification system of the German Sustainable Building Council is a worldwide leading certification system in the field of sustainable building. Key paradigms are the life cycle approach, holism and performance orientation.

Environmental quality

ENV 1.1 Climate action and energy

A product-specific life cycle assessment in accordance with DIN EN ISO 14067 can be prepared for the sound insulation door leaf.

ENV 1.2 Local environmental impact

The components of the door leaf do not contain lead, mercury, cadmium and chromium (VI) compounds.

Economic quality

ECO 1.1 Life cycle cost

During use, there are no costs for the maintenance of the door leaf.

Socio-cultural & functional quality

SOC 1.2 Indoor air quality

Test chamber measurements (AgBB measurement scheme) are available as proof of emissions, e.g. VOC and formaldehyde.

SOC 1.3 Sound insulation and acoustic comfort

For the GTB 100, the value for the sound reduction index, tested according to ISO 717-1, is available.

Technical quality

TEC 1.6 Circular construction

Each door leaf can be dismantled individually and non-destructively.

Process quality

PRO 2.1 Construction site / construction process

The door leaf is delivered in modules and is only worked on selectively at the construction site. This contributes to a low-waste, low-noise and low-dust construction site.

¹ © DGNB GmbH



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BUILDING CERTIFICATION LEED V4

LEED is a US certification system for ecological building. Based on a point scale, different certification levels can be achieved.



Materials and resources

MRp2 Construction and demolition waste management planning

A CWM plan can be prepared and implemented upon request.

MRc1 Building Life-Cycle impact reduction

The door leaf can be reused.

MRc2 Building product disclosure and optimization - environmental product declarations

A product-specific life cycle assessment in accordance with DIN EN ISO 14067 can be prepared for the sound insulation door leaf.

MRc3 Building product disclosure and optimization - sourcing of raw materials

The recycling share (0.5 * pre-consumer + 1.0 * post-consumer) is 18.36%.

MRc4 Building product disclosure and optimization - material ingredients

The components of the door leaf do not contain lead, mercury, cadmium and chromium (VI) compounds.

MRc5 - Construction and demolition waste management

The door leaf can be reused or separated by type for recycling.



Indoor Environmental Quality

IEQc2 Low-emitting materials

Test chamber measurements (AgBB measurement scheme) are available as proof of emissions, e.g. VOC and formaldehyde.

IEQc3 Construction indoor air quality management plan

A complete IAQ plan can be prepared and implemented by specialised personnel upon request.

IEQc9 Acoustic Performance

For the GTB 100, the value for the sound reduction index, tested according to ISO 717-1, is available.



PCDS

PCDS short for "Product Circularity Data Sheet" represents the circularity of a product using a standardised format. The aim is to provide data, improve the exchange of circularity data within supply chains and improve product performance in terms of the circular economy. The PCDS credits are not verified by third parties.



Composition/ Information on product constituents

Chemical substance threshold

2001 The threshold value for chemical substances is 0.1 % (1000 ppm)

Product composition disclosure

2100 The composition of the product is published

Chemical composition

2207 The chemical substances are disclosed

Hazard statements

2301 The product does not contain any substances of very high concern from the REACH candidate list in a concentration above 0.1 % by mass

2311 The product does not contain any substance classified as CMR 1A or 1B in a concentration above the classification criteria according to CLP - Regulations (EC) No 1272/2008.

2321 The product does not contain any restricted substances that could exceed the limits set out in Annex XVII of the REACH Regulation

2331 The product does not require a warning under California Proposition 65.

Pre-consumer recycled content

2402 Pre-consumer recycling share: between 10 and 25 mass percent

2411 All chem. Components of the pre-consumer recycled content of more than 1 % by mass are known

2420 No dangerous substances in a concentration of more than 0.1% by mass

Post-consumer recycled content

2502 Post-consumer recycling share: between 10 and 25 mass percent

2511 All chem. Components of post-consumer recycled content of more than 1% by mass are known

2520 No dangerous substances in a concentration of more than 0.1% by mass

Sourcing statements

2600 The product does not contain any renewable substances



Design for better use

Designed for maintenance & repair

3001 Can be maintained and repaired by trained personnel

3002 No maintenance or repair necessary with professional use

3020 Spare parts are provided by the manufacturer

Designed for safe operation

3100 No leakage of harmful dispersions or emissions



Design for disassembly

Demounting

4000 The door leaf can be dismantled individually and non-destructively

Disassembling

4106 > 95 % of the components can be cleanly separated from the product

Dismantling

4206 >95 % of the materials can be reused after dismantling or recycled for other products



Design for re-use



Circularity pathways/ scenarios - Product designed for ...

- 5000 Reuse possible with little or no change
- 5036 > 95% of the product is destined for recycling at the same quality level
- 5040 Less than 1 % of the product content leaks during the use phase
- 5050 Products are collected for recycling