



Lindner Object doors 68 mm – Type D, I, F and M

Environmental Product Declaration according to ISO 14021

Holder of the declaration

Lindner AG
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Deutschland

Content of the declaration

Product information
Certification system DGNB
Certification system LEED
Certification system BREEAM
General information

Product information

Product description 68 mm door leaf, made from wood and wood composite in sandwich construction. The surface is available in several customised, project-specific designs.

Application Revolving doors for object applications e. g. office and meeting rooms, rooms for industrial purpose, training rooms and laboratories.

- Fire door
- Smoke control door
- Sound insulation door
- Burglary resistance door
- Moisture resistance door
- Radiation protection door

Base material

Base materials per 2 m ²		
System components	Material	Weight proportions [%]
Top layer	Hardboard, composed of solid wood fibres	~ 16
Intermediate layer	Gypsum board	~ 36
Intermediate layer	Light building board, composed of solid wood fibres	~ 12
Intermediate layer	Hard building board, composed of solid wood fibres	~ 6
Edge band	Solid wood	~ 9
Strengthenener	Veneer layer	~ 12
Lacquer	UV water lacquer	< 1
Coating	Phenolic laminated HPL	~ 5
Veneer	Solid wood	~ 2
Glue	PVAC glue	< 1

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Certification system



The Lindner Group is
Member of
DGNB
Deutsche Gesellschaft für Nachhaltiges Bauen
German Sustainable Building Council

Not listed characteristics do not apply to this product



Environmental Quality

ENV1.1 Life Cycle Impact Assessment An ecological balance sheet is available for the production facilities and it can be provided on demand. A project-specific EPD can be produced in accordance with the valid standards. Additional time and costs have to be considered.

ENV1.2 Local Environment Impact

Element / Material/ Surface	Component	VOC	RAL- UZ	Others
Coating on non mineral surface	Clear lacquer	29,8 g/l	-	-
Coating on non mineral surface	Edge coating on HPL surfaces	84,2 g/l	-	-
Coating on non mineral surface	RAL-coating	33,3 g/l	-	-
Non-load-bearing wooden elements inside and outside	All woods and engineered woods			Materials without preservers

ENV1.3 Responsible Procurement Our products can be delivered FSC certificated and fulfil all necessary requirements. After individual assessment, values up to quality score 3 are possible.
Certificate no.: TUEV-COC-000515
Licence no.: FSC-C119815

ENV2.1 Life Cycle Impact Assessment – Primary Energy An ecological balance sheet is available for the production facilities and it can be provided on demand. A project-specific EPD can be produced in accordance with the valid standards. Additional time and costs have to be considered.

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Economic Quality

ECO1.1 Life Cycle Cost The useful life of the doors is about ≥ 50 years (acc. BBSR-table, code no. 344.111 - 344.311, state 11/2011, published by the Federal Institute for Research on Building, Urban Affairs and Spatial Development).



Sociocultural & Functional Quality

SOC1.2 Indoor Air Quality Lindner object doors consist of low-emitting materials, e. g. with respect to VOC or formaldehyde. The AgBB measurement can be used as verification and is available on demand.

TVOC (AgBB/DIBT) C₆-C₁₉: after 28 days 34 µg/m³
 Volatile Aldehydes: below detection limit (< 2 µg/m³)

SOC1.3 Acoustic Comfort The types D, I, F, M can be designed to achieve a rated sound reduction index (laboratory value) acc. to DIN EN ISO 140-03 of up to 47 dB as a single-leaf element and 42 dB as a double-leaf element.

SOC1.4 Visual Comfort Through the integration of glass cut-outs in our wooden doors, it is possible to transport natural light into corridors and rooms.

SOC2.1 Accessibility On request, our products can be delivered as barrier-free installations according to valid specifications and standards, thus providing easier access.

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Technical Quality

TEC1.2	Noise Insulation	The types D, I, F, M can be designed to achieve a rated sound reduction index (laboratory value) acc. to DIN EN ISO 140-03 of up to 47 dB as a single-leaf element and 42 dB as a double-leaf element.
TEC1.5	Easy Cleaning and Maintenance	The door surface is finished with either HPL or lacquer and therefore very easy to clean.
TEC1.6	Deconstruction and Disassembly	Lindner door leaves and frames can be dismantled and replaced by using usual tools. Furthermore, you can clearly separate the components in order to recycle them.



Process Quality

PRO1.5	Documentation for Facility Management	Customary user, maintenance and care instructions are available.
PRO2.1	Environmental Impact of Construction	The compliance with project-related requirements regarding a low-waste, low-noise and low-dust construction site as well as all measures regarding soil and ground water protection are ensured by specialised in-house departments. An appropriate verification can be produced and implemented on request by specialized personnel.
PRO2.2	Construction Quality Assurance	All documents relevant for project documentation can be provided.

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Certification system LEED

Not listed credits do not apply for this product



Sustainable Sites

Construction Activity Pollution Prevention The compliance with project-related requirements of an ESC plan is ensured by specialised in-house departments. A complete ESC plan can be produced and implemented on request by specialised personnel.



Materials and Resources

Construction and Demolition Waste Management Planning Waste that cannot be avoided on site is preferentially put into recycling processes by means of waste management facilities. A complete CWM plan can be produced and implemented on request by specialised personnel.

Building Life Cycle Impact Reduction Lindner products have a long useful life span. Moreover, certain products can be carefully dismantled and reused after a minor work-up (C2C).

Building Product Disclosure and Optimization – Environmental Product Declaration A project specific EPD can be produced in accordance with the valid standards. Additional time and costs have to be considered.

Building Product Disclosure and Optimization – Sourcing of Raw Materials

Component	Weight proportion	Recycled content		Regional Origin
		Pre-Consumer	Post-Consumer	Production site
Gypsum board	~ 36 %	~ 5 %	~ 95 %	
Total		~ 36 %		Ostrov (CZ)

FSC: Our products can be delivered FSC certificated and fulfil all necessary requirements.
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Building Product Disclosure and Optimization – Material Ingredients As a manufacturer, Lindner fulfils the obligations towards the EU chemical directive “REACH” and has created its own REACH declaration. The aim of the **REACH** regulation (**R**egistration, **E**valuation and **A**uthorization of **C**hemicals) is to register materials produced and used in the EU and to determine and record their impact on health and environment.

Construction and Demolition Waste Management Thanks to their ready-to-install design, Lindner system products have been designed to minimize processing waste during their installation. Waste that cannot be avoided on site is preferentially put into recycling processes by means of waste management facilities.

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Indoor Environmental Quality

Minimum Acoustic Performance	Lindner object doors can be designed with a sound reduction index up to $R_w = 32$ dB (laboratory value) when installed with a bottom seal.
Low Emitting Materials	TVOC (AgBB/DIBT) C_6-C_{19} : after 28 days, $34 \mu\text{g}/\text{m}^3$ Volatile aldehydes: below detection limit ($< 2 \mu\text{g}/\text{m}^3$)
Construction Indoor Air Quality Management Plan	The compliance with project-related requirements of an IAQ plan is ensured by specialised in-house departments. A complete IAQ plan can be produced and implemented on request by specialised personnel.
Indoor Air Quality Assessment	Lindner object doors consist of low-emitting materials, e. g. with respect to VOC or formaldehyde. The AgBB measurement can be used as verification and is available on demand.
Acoustic Performance	The types D, I, F, M can be designed to achieve a rated sound reduction index (laboratory value) acc. to DIN EN ISO 140-03 of up to 47 dB as a single-leaf element and 42 dB as a double-leaf element.

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Certification system



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bre Management

Man 01	Sustainable Procurement	Our products can be delivered FSC certificated and fulfil all necessary requirements. Certificate no.: TUEV-COC-000515 Licence no.: FSC-C119815
Man 02	Responsible Construction Practices	Generally, all companies of the Lindner Group largely fulfil the requirements of an environmental management system. For Lindner Group companies certified according to ISO 14001, ISO 50001, SCC**- and OHSAS, further specific environmental and safety targets are defined in conjunction with the annual management review. The implementation of environmental protection and relevant legal regulations are defined in the internal Lindner guideline "Environmental protection".
Man 03	Construction Site Impacts	The compliance with project-related requirements regarding a low-waste, low-noise and low-dust construction site as well as all measures regarding soil and ground water protection are ensured by specialised in-house departments. An appropriate verification can be produced and implemented on request by specialized personnel.
Man 05	Life Cycle Cost and Service Life Planning	The useful life of the doors is about ≥ 50 years (acc. BBSR-table, code no. 344.111 - 344.311, state 11/2011, published by the Federal Institute for Research on Building, Urban Affairs and Spatial Development). Moreover, certain products can be carefully dismantled and reused after a minor work-up (C2C).

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bre Health and Wellbeing

Hea 02	Indoor Air Quality	<p>Lindner object doors consist of low-emitting materials, e. g. with respect to VOC or formaldehyde. The AgBB measurement can be used as verification and is available on demand.</p> <p>TVOC (AgBB/DIBT) C₆-C₁₉: after 28 days 34 µg/m³ Volatile Aldehydes: below detection limit (< 2 µg/m³)</p>
Hea 05	Acoustic Performance	<p>The types D, I, F, M can be designed to achieve a rated sound reduction index (laboratory value) acc. to DIN EN ISO 140-03 of up to 47 dB as a single-leaf element and 42 dB as a double-leaf element.</p>

bre Energy

Ene 01	Energy Efficiency	<p>An ecological balance sheet is available for the production facilities and it can be provided on demand.</p> <p>A project specific EPD can be produced in accordance with the valid standards. Additional time and costs have to be considered.</p>
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bre Materials

Mat 01	Life Cycle Impacts	<p>A project specific EPD can be produced in accordance with the valid standards. Additional time and costs have to be considered.</p>
Mat 03	Responsible Sourcing of Materials	<p>Our products can be delivered FSC certificated and fulfil all necessary requirements.</p> <p>Certificate no.: TUEV-COC-000515 Licence no.: FSC-C119815</p>

bre Waste

Wst 01	Construction Waste Management	<p>Lindner system products have been designed to minimize processing waste during their installation. Waste that cannot be avoided on site is preferentially put into recycling processes by means of waste management facilities.</p>
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General information

CO₂ & Waste

In order to reduce waste from demolition and building measures, waste streams are dedicated to recycling processes. The verification can be done by Lindner.

The used transport packaging (timber, cardboard, foils) can be recycled. Where possible, they are collected separately and supplied to appropriate recycling (packaging regulation).

Lindner system products are delivered to the construction site in ready-for-assembly condition. This means that no work or only minor work has to be done on the product. This way, very little waste or no waste at all is generated on site. Most of the used transport packaging can be recycled. Only certified waste management companies are entrusted with the disposal conforming to the law for waste that cannot be avoided.

Vision 2020: CO₂ neutral and waste-free location

Less is more. Much less is our aim!

The vision: it is our aim to further develop Lindner production sites into CO₂ neutral and waste-free locations. We have derived concrete aims from the vision to make an entrepreneurial contribution to the reduction of CO₂ emissions as well as all commercial waste.

The analysis of major pollutants is of course given top priority.

Environmental Management – Acting sustainably, Saving Resources

For Lindner, responsibility towards humans and environment is as important as the quality of the products. For this reason, an environmental management system acc. to DIN EN ISO 14001 is established company-wide and largely certified.

Our central environment programme comprises the responsible and sustainable use of resources, the reduction of CO₂ emissions and a continuous improvement process to achieve our environmental objectives. An integrated management system evaluates the production of Lindner products regularly according to ecological aspects and adapts the processes to current standards.

Our principles comprise an active waste management in all business units – from waste prevention concept to waste balance. We also keep an eye on preceding stages of the value added chain. Environmental aspects also play a major role in the selection of our suppliers

Energy Management

Towards an environmentally friendly future.

The national and international supply situation asks for a targeted and effective use of resources and environmentally friendly forms of energy. At Lindner, an energy management system based on DIN EN ISO 50001 controls the procurement of energy sources centrally for all locations as well as their transformation, delivery and distribution to affiliated companies.

Energy saving and the change of fossil and nuclear energy to ecological sources of energy are the core of all measurements to implement energetic business objectives. Thus, every single employee is aware of its role in sustainable, operative project management. Due to many small improvements, for example the improvement of compressed air loss, the utilisation of waste heat and targeted light control, we could achieve massive energy savings in the last years. Especially at future-oriented investments, for example the installation of new production plants, we pay attention to the implementation of resource-saving solutions.