

## WOODEN DOORS 68 MM – TYPE D, I, F, M

SELF-DECLARATION ACC. TO DIN EN ISO 14021

**Holder of the declaration:** Lindner AG | Bahnhofstraße 29 | 94424 Arnstorf | Germany

**Content of the declaration:** Product information  
Certification system DGNB  
Certification system LEED  
Certification system BREEAM  
Circular Economy

## PRODUCT INFORMATION

### Green Building Statement

We already think in closed cycles while developing our products. In this connection we act as one of the specialists within the range of sustainable building since many years. Supported by our internal technical department „Green Building“ we ensure the sustainability target of your building project.

### Product description

#### Wooden doors 68 mm – Type D, I, F, M

Interior door element made of wood and wooden materials in sandwich construction with a door leaf of 41 mm thickness. The surface design of the door will be executed according to customer requirements.

### Application area

Swing door elements for object applications e. g. office and meeting rooms, rooms for industrial purpose, training rooms and laboratories.

- Fire protection doors
- Smoke protection doors
- Sound insulation doors
- Burglary protection doors
- Moisture resistant doors
- Wet room doors
- Radiation protection doors
- Recessed doors

### Base materials

Base materials per door leaf 2 sqm = approx. 88 kg		
System Components	Material	Weight proportion (%)
Top layer	Hardboard composed of solid wood fibres	~ 16.0
Intermediate layer	Gypsum board	~ 36.0
Intermediate layer	Light building board composed of solid wood fibres	~ 12.0
Intermediate layer	Hardboard composed of solid wood fibres	~ 6.0
(Inset) edge band	Solid wood	~ 9.0
Reinforced frame	Veneer laminates	~ 12.0
Lacquer	UV-Water lacquer	< 1.0
Coating	Phenolic laminated HPL	~ 5.0
Veneer	Real wood veneer	~ 2,0
Glue	PVAC-glue	< 1,0

**CERTIFICATION SYSTEM DGNB**

Not listed characteristics do not apply to this product.

 **Environmental Quality**

**ENV 1.1 Life Cycle Assessment of the Building**

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.

**ENV 1.2 Local Environment Impact**

Components	Weight proportion (%)	VOC (%)	GISCODE/EMICODE	Others
UV water lacquer	< 1.0	~ 4.18	-	-
Edge coating on HPL surfaces	< 1.0	~ 8.42	-	-
RAL-coating	< 1.0	~ 3.33	-	-
All woods and engineered products	~ 55.0	-	-	Materials are free of wood preservatives

\*- not relevant acc. to DGNB 2018

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.

**ENV 1.3 Responsible Procurement**

Our products can be supplied FSC-certified (Chain of custody) and meet all necessary requirements. The values of quality level 3 will always be attained in the standard.

Certificate no.: TUEV-COC-000515

License no.: FSC-C119815

 **Economical Quality**

**ECO 1.1 Life Cycle Costs**

The useful life of the doors is about ≥ 50 years (acc. BBSR-table, code no. 344.111 - 344.311, state 02/2017, published by the Federal Institute for Research on Building, Urban Affairs and Spatial Development).

 **Sociocultural & Functional Quality**

**SOC 1.2 Indoor Air Quality**

Doors made by Lindner consist of low-emitting materials e. g. with respect to VOC or formaldehyde. The executed measurements are available on demand and can be used as verification.

TVOC (AgBB/DIBT) C6-C16: after 28 days with 160 µg/m<sup>3</sup> (stated is the highest measured value of all tests)

Carcinogen and volatile aldehydes: after 28 days < 3 µg/m<sup>3</sup>

CMR-Substances: after 28 days < 1 µg/m<sup>3</sup>

Report: 392-2017-00428301\_A\_DE

**SOC 1.3 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.

### Sociocultural & Functional Quality

#### **SOC 1.4 Visual Comfort**

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

#### **SOC 2.1 Accessibility**

Upon request, our products can also be designed to be barrier free in accordance with the respective specifications and regulations, thus facilitate easier access to rooms.

### Technical Quality

#### **TEC 1.2 Sound 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.

#### **TEC 1.5 Cleanability**

The door surface is finished with either HPL or lacquer and therefore very easy to clean.

#### **TEC 1.6 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. 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.

### Process quality

#### **PRO 1.1 Comprehensive Project Brief**

The system was developed by experienced in-house engineers and experts. It was continuously improved with the experience of several completed projects. Both guarantee a strong basis.

#### **PRO 1.5 Documentation for Facility Management**

Customary user, maintenance and care instructions are available.

#### **PRO 2.1 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.

#### **PRO 2.2 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 Site**

**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**

The useful life of the doors is about  $\geq 50$  years (acc. BBSR-table, code no. 344.111 - 344.311, state 02/2017, published by the Federal Institute for Research on Building, Urban Affairs and Spatial Development).

Lindner products have a long useful life span. Moreover, certain products can be carefully dismantled and reused after a minor work-up (Circular economy).

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**

Components	Weight proportion (%)	Recycling content (%)		Regionality	
		Pre-Consumer	Post-Consumer	Extraction location	Production location
Gypsum board	~ 36.0	~ 5.0	~ 95.0	-	Ostrov (CZ)
<b>Total</b>			<b>100</b>		

**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 (Registration, Evaluation and Authorization of Chemicals) 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**

The scope of delivery only contain panels which are ready for installation and do not have to be processed on site.

Therefore, the product contributes to a noise- and dust-free construction site.

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.

### Indoor Environmental Quality



#### **Minimum Acoustic Performance**

It is possible to achieve a rated sound reduction index (Laboratory value) acc. to DIN EN ISO 140-03 of up to  $R_w = 43$  dB only with an integrated bottom seal.

#### **Low Emitting Materials**

Doors made by Lindner consist of low-emitting materials e. g. with respect to VOC or formaldehyde. The executed measurements are available on demand and can be used as verification.

TVOC (AgBB/DIBT) C6-C16: after 28 days with  $160 \mu\text{g}/\text{m}^3$  (stated is the highest measured value of all tests)

Carcinogen and volatile aldehydes: after 28 days  $< 3 \mu\text{g}/\text{m}^3$

CMR-Substances: after 28 days  $< 1 \mu\text{g}/\text{m}^3$

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#### **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**

Doors made by Lindner consist of low-emitting materials e. g. with respect to VOC or formaldehyde. The executed measurements are available on demand and can be used as verification.

#### **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.

## CERTIFICATION SYSTEM BREEAM

Not listed characteristics do not apply for this product.



### Management

#### Man 02 Life cycle cost and service life planning

Lindner products have a long service life (due to their resources, manufacturing processes and their high production quality). The useful life of the doors is about  $\geq 50$  years (acc. BBSR-table, code no. 344.111 - 344.311, state 02/2017, published by the Federal Institute for Research on Building, Urban Affairs and Spatial Development).

Lindner products have a long useful life span. Moreover, certain products can be carefully dismantled and reused after a minor work-up (Circular economy).

#### Man 03 Responsible construction practices

All companies of the Lindner Group meet the requirements of an environmental management system.

For ISO 14001, ISO 50001, SCC \*\* and OHSAS certified companies within the Lindner Group, additional specific environmental and safety objectives are defined in conjunction with the annual management review.

The implementation of environmental protection and the relevant legal regulations are defined in the Lindner internal guideline "Environmental Protection".



### Health and Wellbeing

#### Hea 01 Visual comfort

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

#### Hea 02 Indoor air quality

Doors made by Lindner consist of low-emitting materials e. g. with respect to VOC or formaldehyde.

#### Hea 05 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.

#### Hea 18 Volatile organic compounds (In-Use only)

Doors made by Lindner consist of low-emitting materials e. g. with respect to VOC or formaldehyde.



### Materials

#### Mat 01 Life cycle impacts

Material evidences and reports may be provided. A project-specific EPD can be produced in accordance with the valid standards. Additional time and costs have to be considered.

#### Mat 03 Responsible sourcing of construction products

Our products can be supplied FSC-certified (Chain of custody) and meet all necessary requirements. The values of quality level 3 will always be attained in the standard.

Certificate no.: TUEV-COC-000515

License no.: FSC-C119815

An environmental management system acc. to DIN EN ISO 14001 is established company-wide and largely certified.

#### Mat 06 Material efficiency

Lindner door leafs and frames can be dismantled and replaced by using usual tools. Furthermore, you can clearly separate the components in order to recycle them. 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.



### Waste

#### **Wst 01 Construction waste management**

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. 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.

#### **Wst 06 Functional adaptability (non-residential only)**

Lindner products have a long service life (due to their resources, manufacturing processes and their high production quality). The useful life of the doors is about  $\geq 50$  years (acc. BBSR-table, code no. 344.111 - 344.311, state 02/2017, published by the Federal Institute for Research on Building, Urban Affairs and Spatial Development).

Lindner products have a long useful life span. Moreover, certain products can be carefully dismantled and reused after a minor work-up (Circular economy). Our pursued target of a 100 % technical cycle, allows a clean separation and a complete recycling of all components.



### Pollution

#### **Pol 08 Reduction of noise pollution**

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.



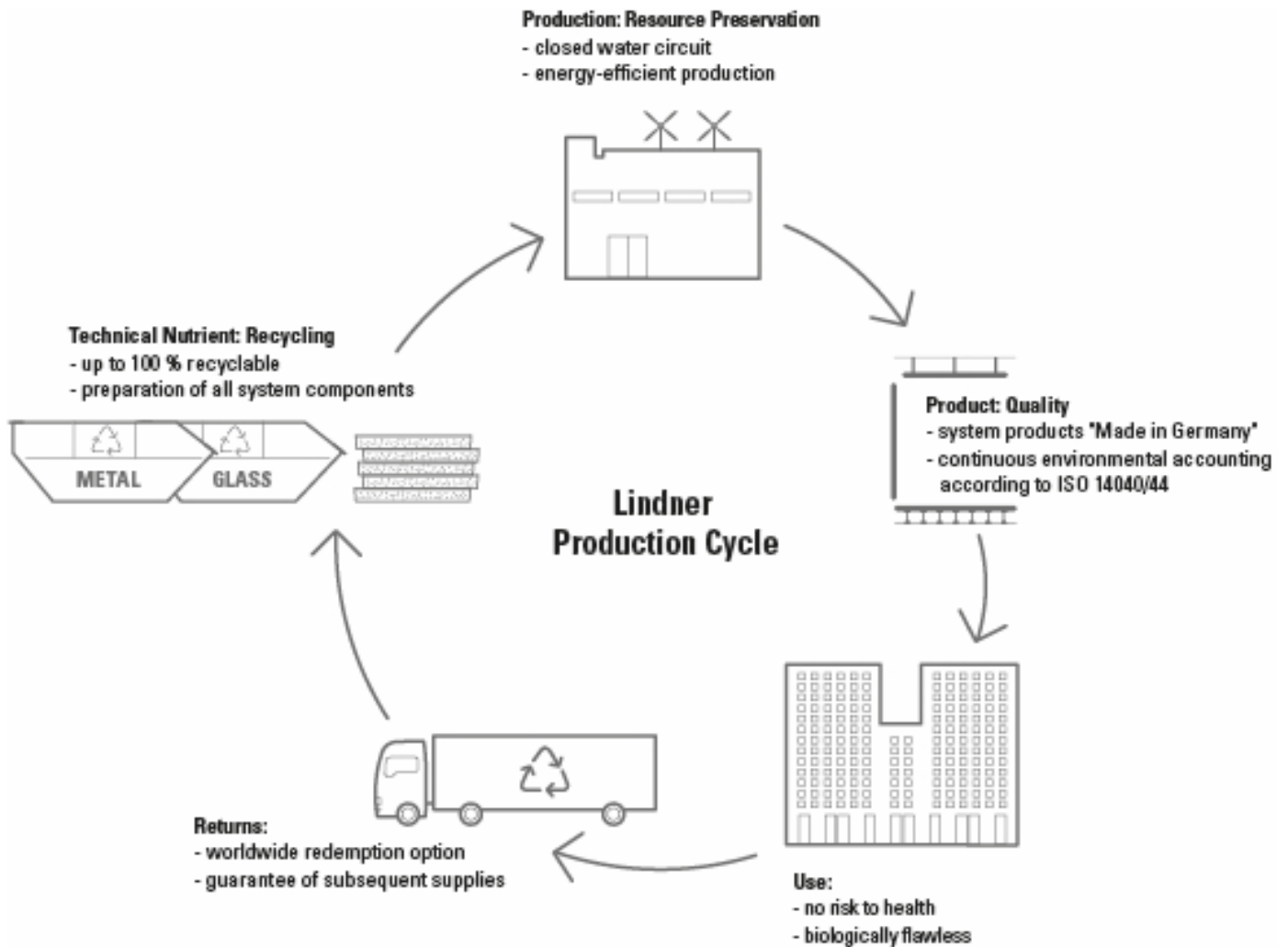
**CIRCULAR ECONOMY**



**General information**

Due to the transfer of the Circular Economy thoughts we avoid waste, toxic substances and pollution. The 100 % technical cycle we are striving for, allows a separation of types and nearly a whole reuse of all materials. Environmental aspects already play a primary role when choosing our suppliers. Responsibility towards people and environment is as important for Lindner as the quality of the products. Due to this reason an environmental management system according to DIN EN ISO 14001 is established and mostly certified through the whole Lindner Group.

- + Protection of prospective generations and eco systems through care of natural resources
- + Security by choosing high-quality and contaminant-free materials
- + Health as supreme asset of humans
- + Safe environment for all building occupants





### **Material Health**

The parts of Lindner doors have to be secure and highly compatible for health and environment. Lindner develops systems which are environmentally friendly and also healthy for humans, from the production up to the usage and reuse.

We do know the chemical substances of all materials and run an ongoing process to develop safer products. To meet all criteria according to sustainability and human health, system components were modified and also replaced.

### **Material Reutilization**

Lindner doors are products, which can be recycled or further recovered. Therefore, complete components can be reused or new created, after transferring to recycling processes.

### **Renewable Energy**

Through eco-management certification and our in-house environmental accounting, the whole Lindner Group campaigns for a reduction of the ecological footprint of their own production processes by using less energy.

The share of renewable energy is currently around 37 %.

Increasing the share of renewable energy in our production sites is an ongoing process. The reduction of energy within the production sites is our main goal.

### **Water Stewardship**

The concept of water circulation reduces our water consumption systematically.

Due to sedimentation and cleaning of the solid matter, the process water can be pursued in a closed loop, so the fresh water consumption is reduced to a minimum.

### **Social Fairness**

The most important corporate principle is the focus on the individual employee. For this reason the compliance rules "Our Values" for employees were defined. The Lindner Group supports a number of social projects, which are distributed in regional and nationwide areas. Therefore, the charitable "Hans Lindner Stiftung" was founded in 1991.

As a responsible manufacturer, Lindner is certified in accordance to the international environmental management standard ISO 14001. This standard supports our further development of managing scarce resources and the environment in general.