

Sound insulation door – ATB 42

Self-declaration acc. to DIN EN ISO 14021

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

Content of the declaration: Product information
Certification system DGNB
Certification system LEED
Certification system BREEAM
Product-Certification Cradle to Cradle®

Product information

Green Building Statement

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

Product description

Lindner ATB 42

The door leaf ATB 42 is an aluminium frame door with glass inlay. The door leaf thickness is 42 mm.

Application area

For the application inside of buildings, e.g. offices, conference rooms, industrial workspaces as well as rooms for training and research.

Base materials

Base materials per door leaf 1 m x 2,2 m with single glazing

System components	Material	Weight proportions (%)	
		32 dB	37 dB
Tempered / laminated safety glass*	Glass	~ 71,0	~ 78,0
Glazing frame	Aluminum	~ 28,0	~ 20,0
Gasket	EPDM	~ 1,0	~ 1,0
Screws	Steel	< 0,5	< 0,5
Screws	Stainless Steel	< 0,5	< 0,5
Clip-on	Plastic	< 0,5	< 0,5

*Accessories such as pushers, straps and locks are provided from suppliers. If available, the UPD for the accessories be provided by the manufacturer.

Material explanation

Glass

ESG, Tempered safety glass
VSG, Laminated safety glass

Aluminum

Extruded aluminum profiles are coated (powder coated or anodized), cut and mounted as a frame with screws and corner connectors.

Steel

All metal alloys whose main component is iron and whose content of carbon dioxide is between 0.02 % and 2.06 % are named steel.

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	VOC (%)	GISCODE / Emicode	Other
Tempered / laminated safety glass	-	-	-
Glazing frame	-	GISCODE BS 10 not applicable for powder coating	Without lead, mercury, cadmium and chrome (VI) compounds
Gasket	-	-	-
Thin plate	-	-	-
Screws	-	-	-
Clip-on	-	-	-
Total			

„-“ for „not relevant“ according DGNB 2018

ENV 1.3 Verantwortungsbewusste Ressourcengewinnung

The product ATB 42 does not contain any timber, timber-based products or timber-based components.

Economical Quality

ECO 1.1 Life cycle costs

Door leaves can be expected to remain durable for up to 50 years (acc. to BBSR table, code no. 344.111 to 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

Due to the low TVOC value, the Lindner ATB 42 positively contributes to the indoor air quality.

It is many times lower than the limit value of 500 µg/m³.

TVOC (AgBB/DIBT) C6-C16: after 28 days 68 µg/m³

Formaldehyde value: after 28 days < 3 µg/m³)

Test report no. 392-2018-000539019

A Material Health Certificate “Silver” from the Cradle to Cradle Products Innovation Institute is available for the product.

SOC 1.3 Acoustic Comfort

The Lindner ATB 42 single door leaf can be designed with a valued sound insulation of $R_w = 32$ dB up to $R_w = 37$ dB according to ISO 717-1.

SOC 1.4 Visual Comfort

The Lindner ATB 42 consists mostly of glass. Therefore, daylight from the facades can reach the corridor.

SOC 2.1 Accessibility

Our products can after respective requirements and regulations by request also be executed with disability access for enabling a facilitated access to rooms

Technical Quality

TEC 1.2 Sound Insulation

The Lindner ATB 42 single door leaf can be designed with a valued sound insulation of $R_w = 32$ dB up to $R_w = 37$ dB according to ISO 717-1.

TEC 1.6 Deconstruction and Disassembly

The door leaves and frames can be dismantled and reutilized. Lindner system product are designed to allow assembly on site with almost no rubbish. Certain rubbish cannot be avoided on site, but will principally be recycled by specialised companies.

Process Quality

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.



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

Abfall, der auf Baustellen nicht vermieden werden kann, wird über Entsorgungsfachbetriebe vorrangig Recyclingprozessen zugeführt. Ein kompletter CWM-Plan kann auf Anfrage durch Fachpersonal erstellt und implementiert werden.

Building Life Cycle Impact Reduction

Lindner products have a long life expectancy. Doors can be expected to remain durable for up to 50 years (acc. to BBSR table, code no. 344.111 to 344.311, state 02/2017, published by the Federal Institute for Research on Building, Urban Affairs and Spatial Development). Moreover, certain products can systematically be dismantled and reused after small processing (C2C).

Our pursued target of a 100 % technical cycle, allows a clean separation and a complete recycling of all components. Lindner products are designed in a way that they can be easily dismantled without any damages what enables to easy changes of the use of the building.

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

Components by double glazing with 32 dB	Weight proportion (%)	Recycling content (%)		Production location
		Pre-Consumer	Post-Consumer	
Tempered / laminated safety glass	~ 71,0	20,0 %	5,0 %	Arnstorf
Glazing frame	~ 28,0	0,0 %	30 %	Arnstorf
Gasket	~ 1,0	0,0 %	0,0 %	Arnstorf
Screws	< 0,5	0,0 %	0,0 %	Arnstorf
Clip-on	< 0,5	0,0 %	0,0 %	Arnstorf
Total	100	~ 19,1 %		

Components by double glazing with 37 dB	Weight proportion (%)	Recyclinganteil (%)		Production location
		Pre-Consumer	Post-Consumer	
Tempered / laminated safety glass	~ 78,0	20,0 %	5,0 %	Arnstorf
Glazing frame	~ 20,0	0,0 %	30 %	Arnstorf
Gasket	~ 1,0	0,0 %	0,0 %	Arnstorf
Screws	< 0,5	0,0 %	0,0 %	Arnstorf
Clip-on	< 0,5	0,0 %	0,0 %	Arnstorf
Total	100	~ 17,7 %		

The Lindner ATB 42 product does not contain any materials made of wood. FSC / PEFC certification is therefore not required.



Materials and Resources

Building Product Disclosure and Optimization – Material Ingredients

As manufacturer of products Lindner fulfils the obligations towards the EU chemical directive „REACH“ and created its own REACH declaration.

The aim of the **REACH** regulation (**R**egistration, **E**valuation and **A**uthorization of **C**hemicals) is to capture 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

The Lindner ATB 42 single door leaf can be designed with a valued sound insulation of $R_w = 32$ dB up to $R_w = 37$ dB according to ISO 717-1.

Low Emitting Materials

Due to the low TVOC value, the Lindner ATB 42 positively contributes to the indoor air quality.

It is many times lower than the limit value of $500 \mu\text{g}/\text{m}^3$.

TVOC (AgBB/DIBT) C₆-C₁₆: after 28 days $68 \mu\text{g}/\text{m}^3$

Formaldehyde value: after 28 days $< 3 \mu\text{g}/\text{m}^3$

Test report no. 392-2018-00053901

A Material Health Certificate “Silver” from the Cradle to Cradle Products Innovation Institute is available for the product.

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 doors are made from materials that show almost no emissions of e.g. VOC and formaldehyde.

TVOC (AgBB/DIBT) C₆-C₁₆: after 28 days $68 \mu\text{g}/\text{m}^3$

Formaldehyde value: after 28 days $< 3 \mu\text{g}/\text{m}^3$

Test report no.: 392-2018-00053901

A Material Health Certificate “Silver” from the Cradle to Cradle Products Innovation Institute is available for the product.

Daylight

The Lindner ATB 42 consists mostly of glass. Therefore, daylight from the facades can reach the corridor.

Acoustic Performance

The Lindner ATB 42 single door leaf can be designed with a valued sound insulation of $R_w = 32$ dB up to $R_w = 37$ dB according to ISO 717-1.

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 life expectancy (due to the raw materials, production processes and high production quality).

Moreover, certain products can systematically be dismantled and reused after small processing (C2C). Doors can be expected to remain durable for up to 50 years (acc. to BBSR table, code no. 344.111 to 344.311, state 02/2017, published by the Federal Institute for Research on Building, Urban Affairs and Spatial Development).

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

The Lindner ATB 42 consists mostly of glass. Therefore, daylight from the facades can reach the corridor.

Hea 02 Indoor air quality

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

Test chamber measurements according to the AgBB measurement scheme are available as proof.

TVOC (AgBB/DIBT) C₆-C₁₆: nach 28 Tagen 68 µg/m³

Formaldehyde value: after 28 days < 3 µg/m³

Report no.: 392-2018-00053901

A Material Health Certificate "Silver" from the Cradle to Cradle Products Innovation Institute is available for the product.

Hea 05 Acoustic performance

The Lindner ATB 42 single door leaf can be designed with a valued sound insulation of R_w = 32 dB up to R_w = 37 dB according to ISO 717-1.

Hea 18 Volatile organic compounds (In-Use only)

Lindner doors are made from materials that show almost no emissions of e.g. VOC and formaldehyde.

TVOC (AgBB/DIBT) C₆-C₁₆: nach 28 Tagen 68 µg/m³

Report no.: 392-2018-00053901

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

Lindner doors are made from materials with a high recycling content. Local suppliers are preferred. The company Lindner is certified according to the environmental management system according to DIN EN ISO 14001.

Mat 06 Material efficiency

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.



Waste

Wst 01 Construction waste management

Lindner soundproof door leafs are produced project-specific so that they can be installed on site as low-waste as possible. Waste that cannot be avoided on site will be preferentially returned to recycling processes via waste management companies.

Due to the controlled assembly in the factory, unnecessary sources of error can be avoided.

A complete CWM plan can be issued and implemented by the specialists on request.

Wst 06 Functional adaptability (non-residential only)

Lindner products have a long life expectancy. Doors can be expected to remain durable for up to 50 years (acc. to BBSR table, code no. 344.111 to 344.311, state 02/2017, published by the Federal Institute for Research on Building, Urban Affairs and Spatial Development). Moreover, certain products can systematically be dismantled and reused after small processing (C2C).

Our pursued target of a 100 % technical cycle, allows a clean separation and a complete recycling of all components.

Lindner products are designed in a way that they can be easily dismantled without any damages what enables to easy changes of the use of the building.



Pollution

Pol 05 Reduction of noise pollution

The Lindner ATB 42 single door leaf can be designed with a valued sound insulation of $R_w = 32$ dB up to $R_w = 37$ dB according to ISO 717-1.



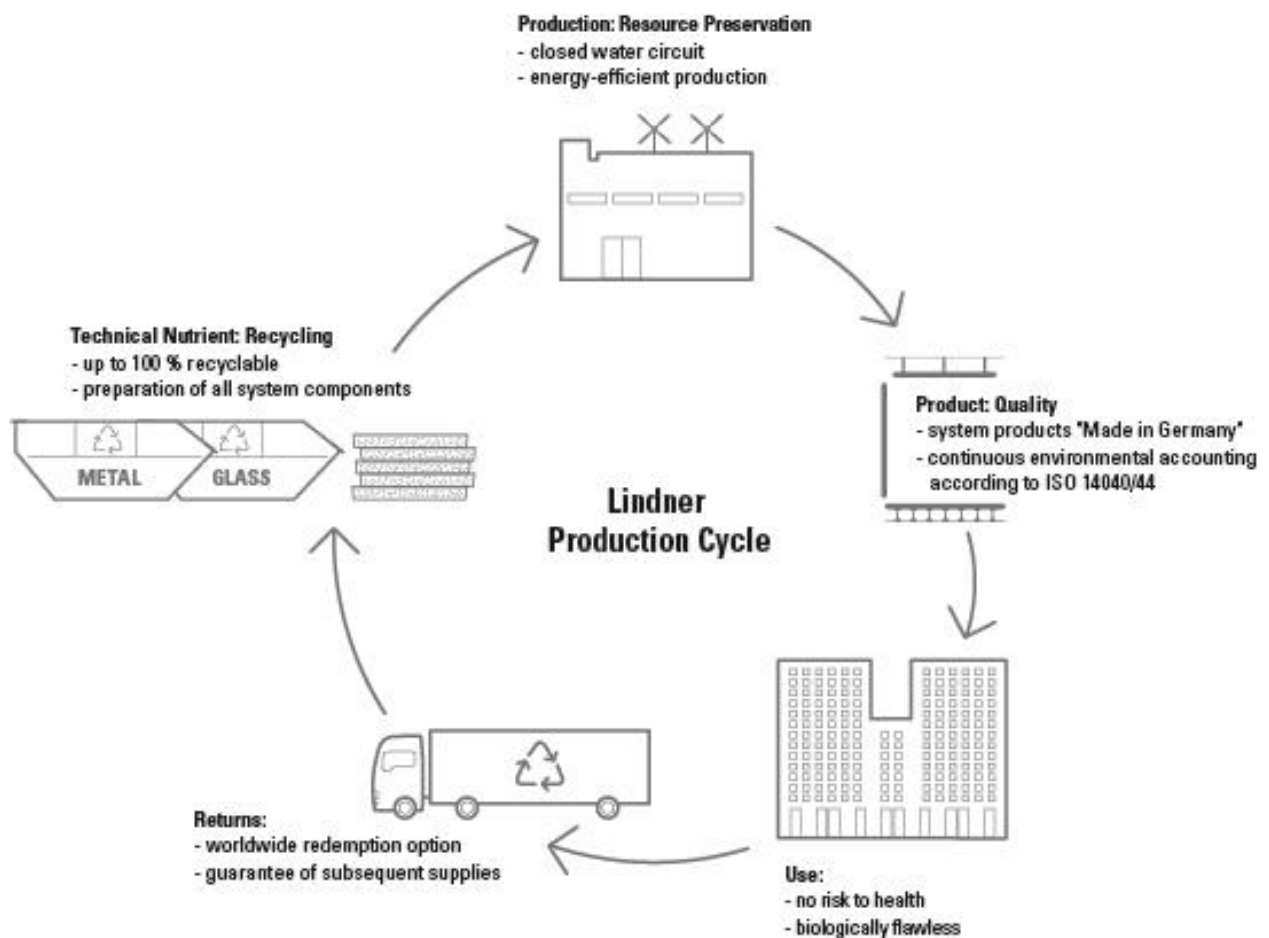
PRODUCT CERTIFICATION CRADLE TO CRADLE®

Information on Cradle to Cradle®

The interior door element Lindner ATB 42 has a Cradle to Cradle® certification TM in silver.
Certificate number: 5773

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.

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





Material Health



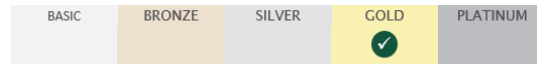
The parts of the Lindner ATB 42 have to be secure and highly compatible for health and environment. Lindner develops systems which are environmentally friendly and also healthy for humans, from the production up to the usage and reuse.

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.

Emission tests to national- and international standards (for example AgBB-scheme) assure pollutant-free and unobjectionable materials.



Material Reutilization



The Lindner ATB 42 is a product which can be recycled or further recovered.

Therefore, complete components can be reused or new created, after transferring to recycling processes.

In the end of the use phase all ingredients can be sorted separately.



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.