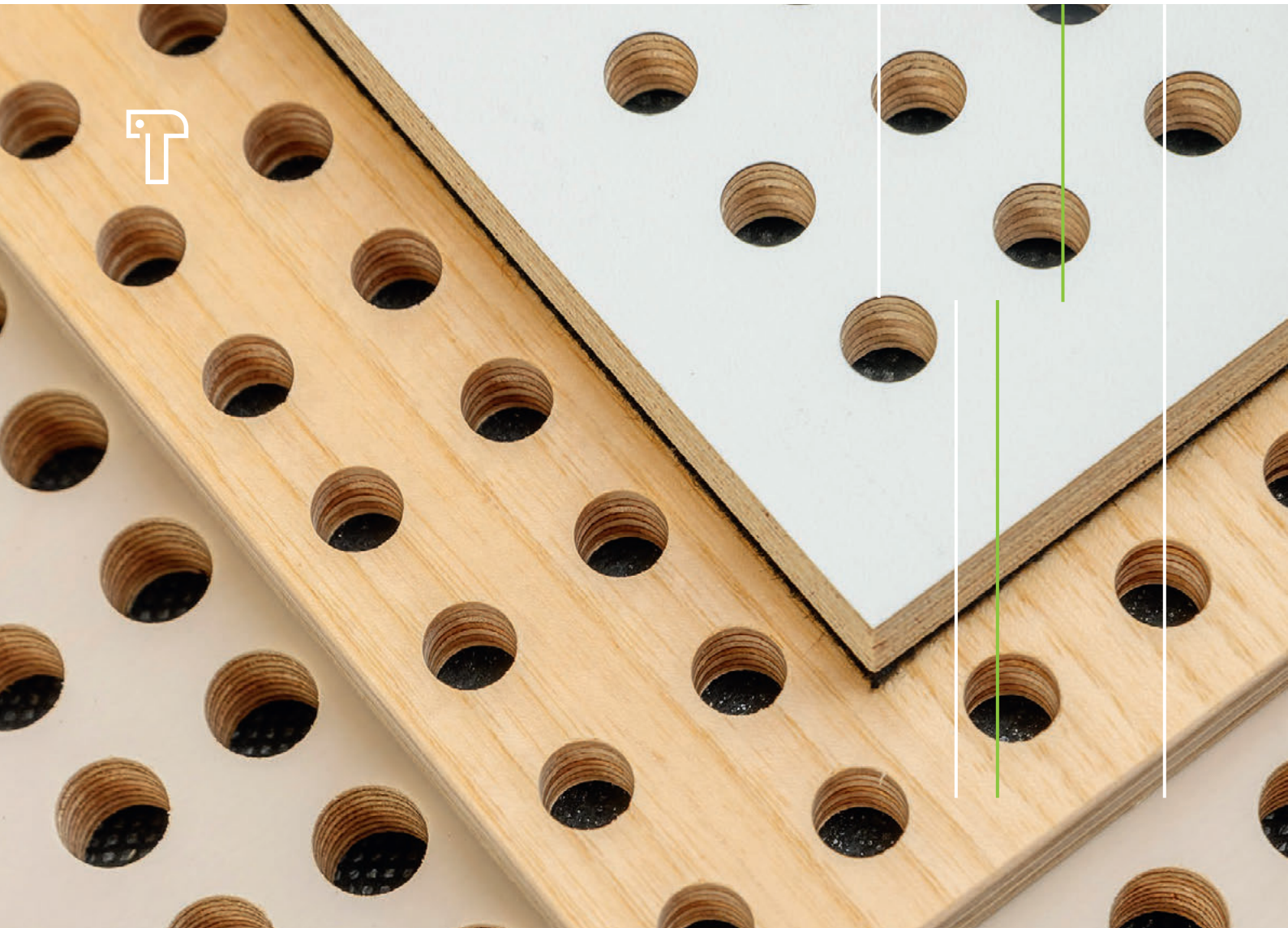
ENG

Riga Wood
Latvijas Finieris Group

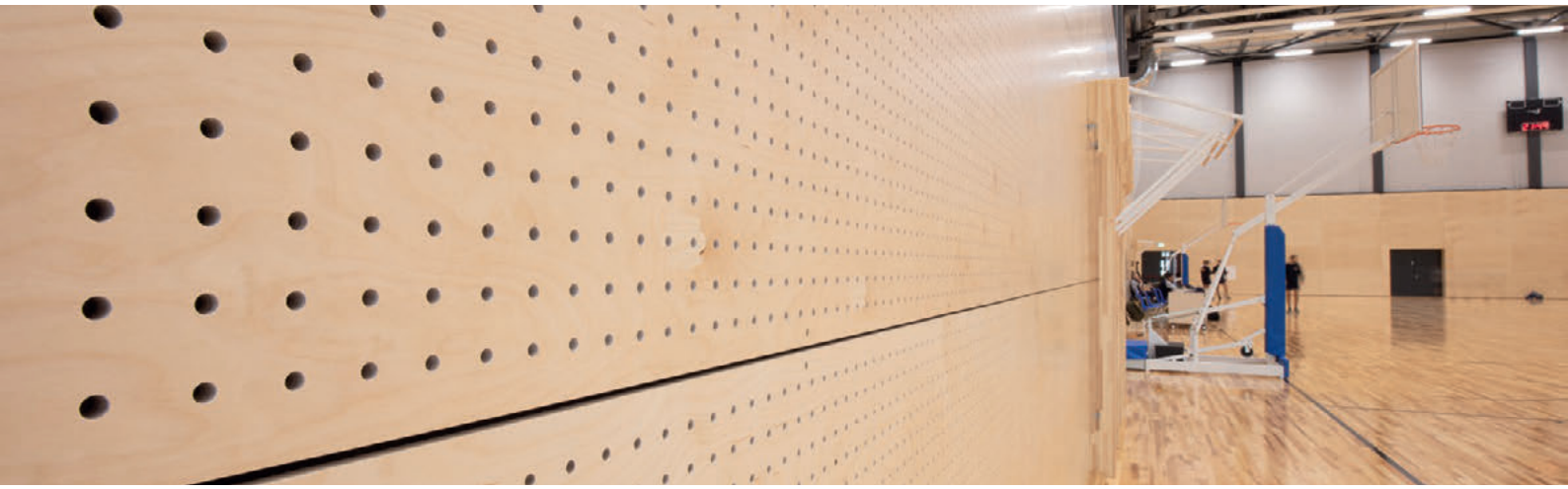
Acoustic Panels

Perforated

*Riga Wood birch throughout plywood with **perforations**, designed to provide improved insulation and acoustic performance.*



Acoustic Panels
Perforated



Application

Riga Wood Acoustic panels have both functional and decorative features, making them the perfect choice for indoor applications. Perforation diameter and their thoroughly planned distance, well combined, allow the panels to absorb noise and create a healthy, pleasant and more peaceful environment.

- Decorative wall & Ceiling panels
- Separating wall elements
- Joinery, furniture & Shopfittings

Major advantages

- Absorbs noise and echo
- Decorative appearance with a wide range of high-quality surfaces
- Aesthetic and visually attractive
- Ready to use, easily workable
- Low volatile organic compounds (VOC), including formaldehyde emissions
- Sustainable product

Base plywood

Riga Wood birch throughout plywood Riga Decor, Riga Lacquer, Riga HPL, Riga Mel and Riga Ply are recommended as base panels.

Material	Maximum size (mm)	Thickness (mm)
Riga Decor	1525x3050	6.5–21
Riga Lacquer	1250x3050	6.5–21
Riga HPL	1250x3050	6.5–21
Riga Mel	1525x3050	6.5–21
Riga Ply	1525x3050	6.5–21

* Information about the characteristics of the materials can be found in the product data sheets.

Machining and treatment

Perforation with a distance of 16 mm or 32 mm.
Perforation diameter: 5, 8, 10, 12 mm.

Distance between drilling centres (mm)	Perforation diameter (mm)	Drillholes (%)
16	5	8
	8	19
32	8	5
	10	8
	12	11

Acoustic panels can be further machined and treated according to customer’s requirements: T&G, cut-to-size, CNC, milled, lacquered. Nonwoven fabric can be glued on the reverse face of the panel.

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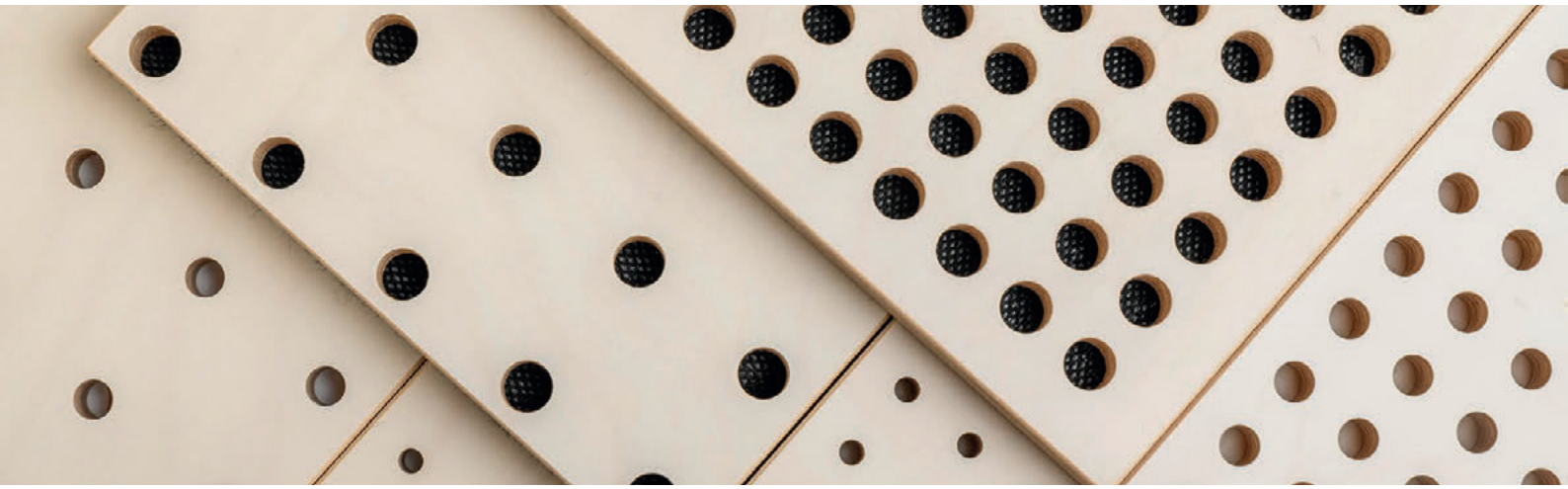


Gluing classes

Riga Wood birch plywood is glued with weather and boil-proof phenol formaldehyde or lignin phenol formaldehyde resin adhesive according to EN 314 / Class 3 Exterior.
Bonding with moisture resistant low emission melamine-urea-formaldehyde resin according to EN 314 / Class 1 and BS 1203 / H1 is possible.

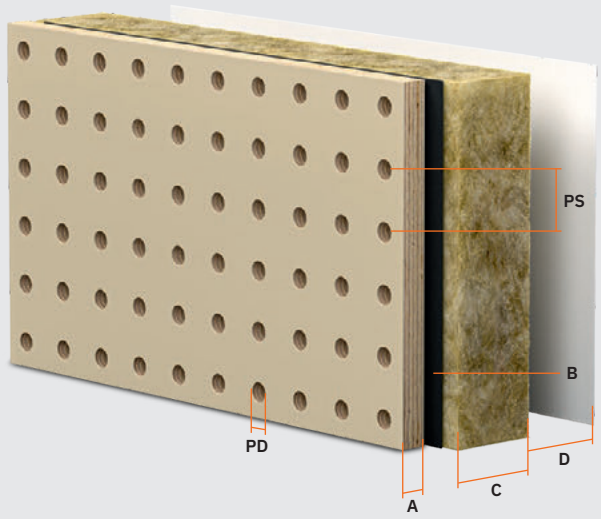
Formaldehyde emission

Riga Wood birch plywood formaldehyde emission level is significantly below EN 13986 Class E1 and complies with EPA TSCA Title VI and CARB Phase 2.
Riga Ply is also compliant with the requirements of the Finnish Emission Classification of Building Materials (M1), French VOC Emissions Labelling Class A+ and Japanese 4-Star Regulation.

Testing report

The measurements of the plywood panel sound absorption coefficient are made in cooperation with acoustics laboratory ”R&D akustika” according to EN ISO 11654.
The following test results are shown for uncoated panels.

Acoustic panel construction



A	Plywood	Thickness: 9, 12, 15 or 18 mm
B	Nonwoven fabric	Density: 60 g/m^2
C	Mineral wool	Density: 80 kg/m^2
D	Air Gap	–
PD	Perforation diameter	5–12 mm
PS	Perforation step (distance between drilling centres)	16 or 32 mm

Acoustic Panels
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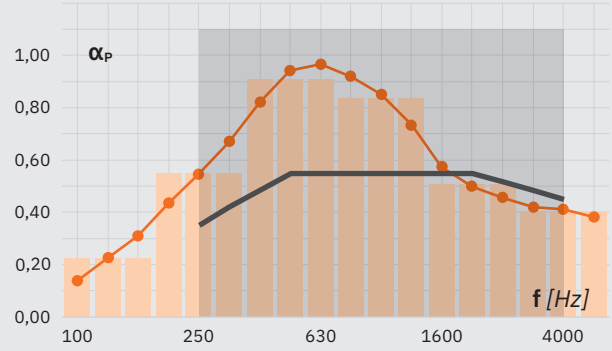
Panel P 12/5-16

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	5	16	25	0

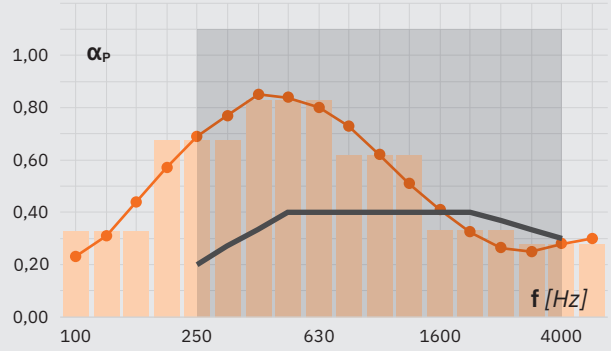
Absorption coefficient α_w: 0.55
Absorption class: D



Panel P 12/8-32

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	8	32	25	0

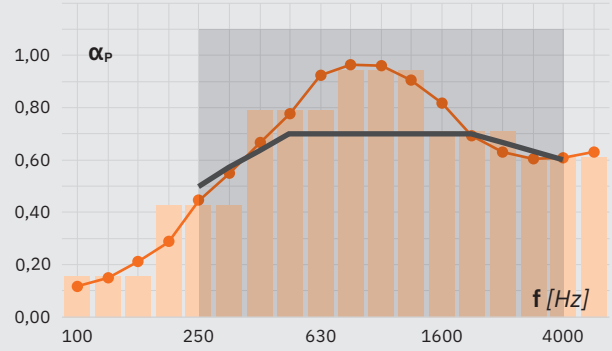
Absorption coefficient α_w: 0.40
Absorption class: D



Panel P 12/8-16

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	8	16	25	0

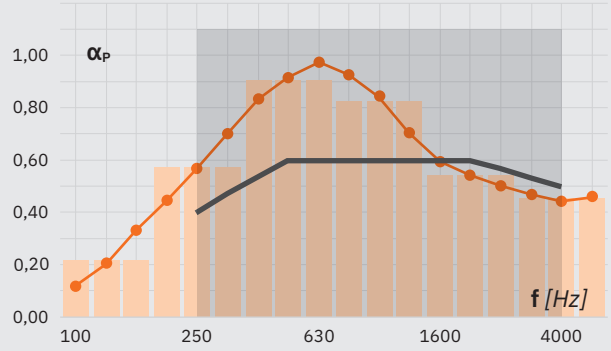
Absorption coefficient α_w: 0.70
Absorption class: C



Panel P 12/10-32

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	10	32	25	0

Absorption coefficient α_w: 0.60
Absorption class: C



Predicted sound absorption coefficient octave bands

Predicted sound absorption coefficient in ⅓ octave bands

Reference curve by EN ISO 11654

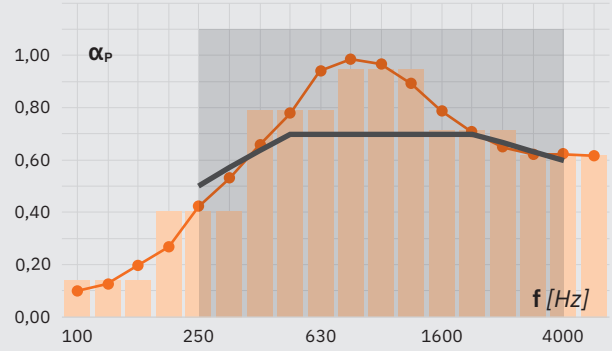
Reference curve by EN ISO 11654

Acoustic Panels
Perforated

Panel P 15/8-16

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
15	8	16	25	0

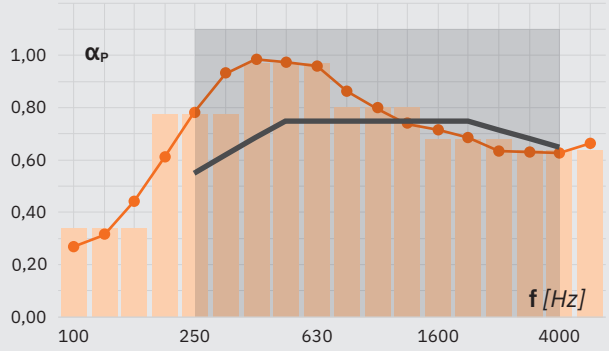
Absorption coefficient α_w: 0.70
Absorption class: C



Panel P 12/8-16

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	8	16	25	35

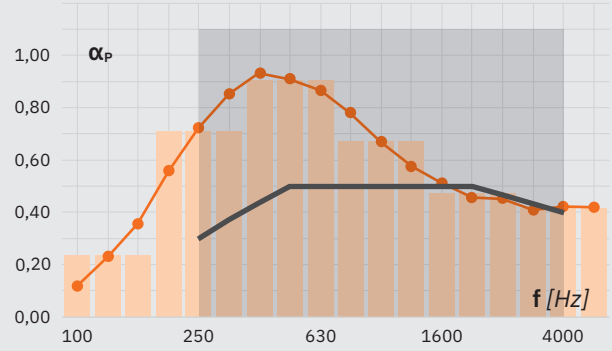
Absorption coefficient α_w: 0.75
Absorption class: C



Panel P 12/5-16

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	5	16	25	35

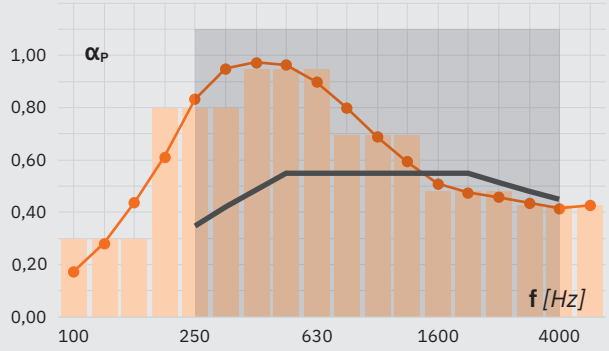
Absorption coefficient α_w: 0.50
Absorption class: D



Panel P 12/10-32

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	10	32	25	35

Absorption coefficient α_w: 0.55
Absorption class: D



Predicted sound absorption coefficient octave bands

Predicted sound absorption coefficient in ⅓ octave bands

Reference curve by EN ISO 11654

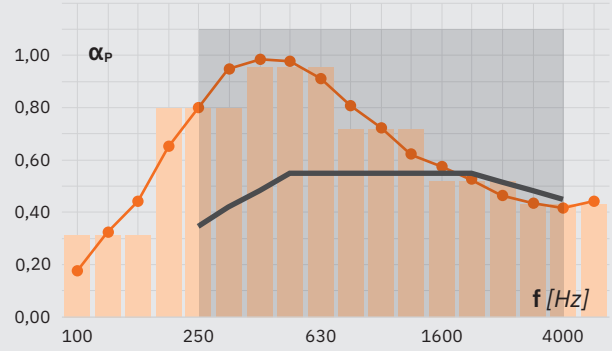
Reference curve by EN ISO 11654

Acoustic Panels
Perforated

Panel P 12/12-32

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	12	32	25	35

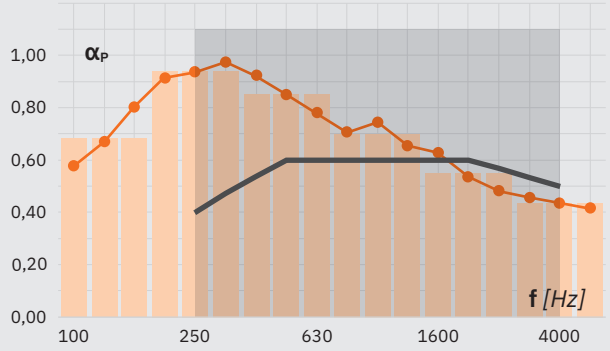
Absorption coefficient α_w: 0.55
Absorption class: D



Panel P 12/10-32

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	10	32	25	175

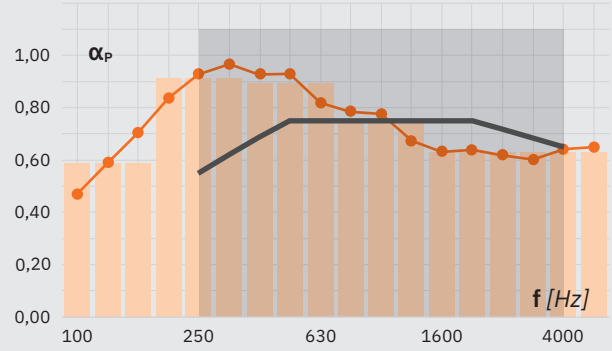
Absorption coefficient α_w: 0.60
Absorption class: C



Panel P 12/8-16

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
12	8	16	25	175

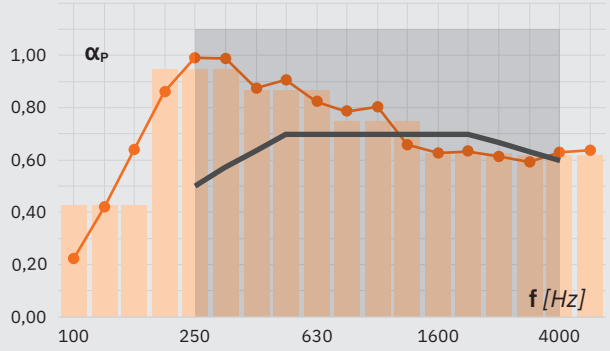
Absorption coefficient α_w: 0.75
Absorption class: C



Panel P-15/8-16

Plywood	Perforation		Mineral wool	Air Gap
A	**PD**	**PS**	**C**	**D**
15	8	16	25	175

Absorption coefficient α_w: 0.70
Absorption class: C



Predicted sound absorption coefficient octave bands

Predicted sound absorption coefficient in ⅓ octave bands

Reference curve by EN ISO 11654

Reference curve by EN ISO 11654

Acoustic Panels
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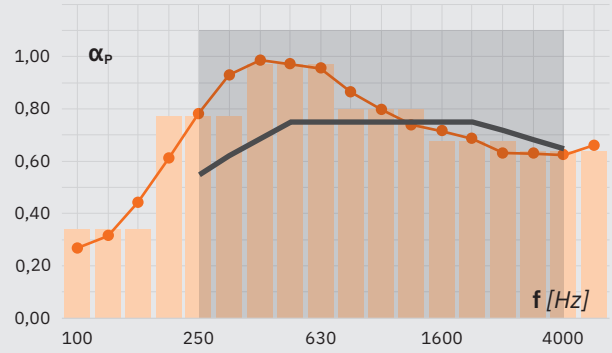
Unvarnished and varnished panel acoustic performance comparison

Example for panel P-12/8-16 (C=25, D=35)

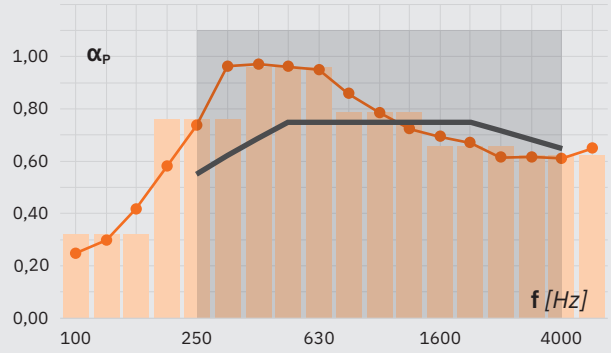
Unvarnished

Absorption coefficient α_w: 0.75
Absorption class: C



Varnished

Absorption coefficient α_w: 0.75
Absorption class: C



The provided information is for reference only and Riga Wood reserves the right to amend and supplement the specifications of manufactured products without prior notice.

Predicted sound absorption coefficient octave bands

Predicted sound absorption coefficient in ⅓ octave bands

Reference curve by EN ISO 11654

Reference curve by EN ISO 11654

Sustainability

We strongly believe that wood-based products in industrial use are a great option for carbon storage and a big part of the solution to achieve climate change mitigation. The key principles of sustainability and responsible governance are deeply rooted in our company's traditions and we aim to further develop our initiatives by actively engaging with stakeholders, material suppliers and clients.

Storage

Plywood must be stored in a well ventilated, weather protected area with the panels stacked both horizontally and level.

Additional information is available in the Riga Wood plywood handbook: https://www.finieris.com/en/downloads/brochures

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Promoting Sustainable Forest Management
PEFC/12-31-001
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