

Acoustical Solutions

SHINNOKI®
prefinished wood panels

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Acoustic Class A Fire Retardant Black MDF (ASTM E84-02011A / CARB2 and TSCA Title VI compliant) + acoustic absorbing fibreglass tissue on the back.

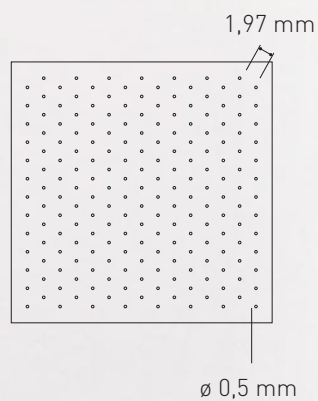


Acoustic panels

3000 x 1200 x 18 mm

Top layer in one of the 16 prefinished veneers of the Shinnoki® range.

ø 0,5 mm



INSTALLATION see page 6-10

Shinnoki offers prefinished wood veneered panels for architects and cabinet makers to design and create stylish and distinctive interiors. Unlike regular veneered panels, Shinnoki products are ready-to-use and as easy to work with as a melamine board, huge time and cost-saving but with the same unique look and feel that is typical for real wood veneer.

Thanks to our proprietary mixmatch technique and our years of experience in product finishing, Shinnoki panels guarantee a continuous look without significant visual interruptions and color consistency throughout your entire project. Shinnoki is a complete program including matching panels, veneers and edge banding all quickly available from stock in 16 timely colors.

This additional range of acoustically absorbing panels has been developed to absorb and reduce any disturbing sounds in a room. This leads to greater acoustic comfort, even in highly frequented rooms with a lot of background noise. The mechanism of absorption at the core of a Shinnoki acoustical panel is called the principle of Helmholtz resonance, named after the German physician Herr Hermann Helmholtz, who discovered this phenomenon in 1863. Nano perforations in the surface and a large cavity in the material ensure that medium and low frequencies (= human voice) are efficiently absorbed.



Natural Oak ✓



Ivory Oak ✓



Milk Oak ✓



Chalk Ash



Desert Oak ✓



Manhattan Oak ✓



Granite Walnut



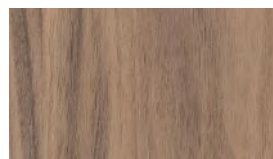
Dusk Fraké



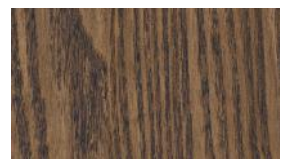
Stone Triba



Mineral Triba ✓



Frozen Walnut ✓



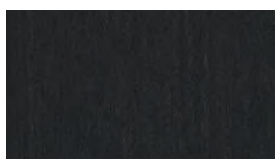
Cinnamon Triba



Smoked Walnut ✓



Stardust Walnut



Chocolate Oak



Raven Oak

The benefits of Shinnoki:

- 16 trend driven real wood designs
- consistent colors and quality thanks to the mixmatch technique and industrial processing
- prefinished surface making the processing extremely fast, easy and price-effective
- complete range of panels, laminated veneers and edge banding
- wood from well managed forests

✓ : Available from stock / Other colors manufactured on demand

MATERIAL COMPOSITION

Top layer	Top layer in one of the 16 prefinished veneers of the Shinnoki® range.
Core	Acoustic Class A Fire Retardant Black MDF (ASTM E84-02011A / CARB2 and TSCA Title VI compliant)
Backing	All panels have a backing for stability + acoustic absorbing glass fibre tissue

WEIGHT ± 10 kg/m²

PERFORATION

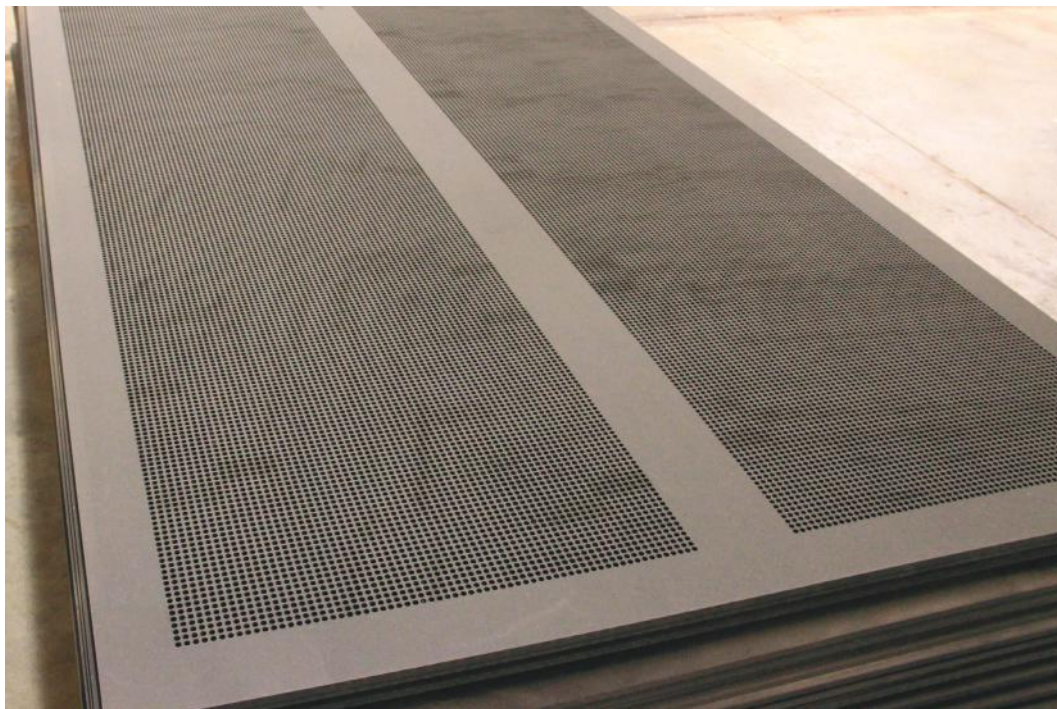
Provided with perforated top layer with nano perforations diameter of 0,5 mm across the entire surface area (diagonal, 1,97/1,97/0,5 mm) in combination with perforated acoustic core (with perforated zone in the core [linear, 8/8/6 mm]) and acoustic absorbing glass fibre tissue (back)

STD. MEAS. FULL PANEL

(square-sawn) 3000x1200x±18 mm

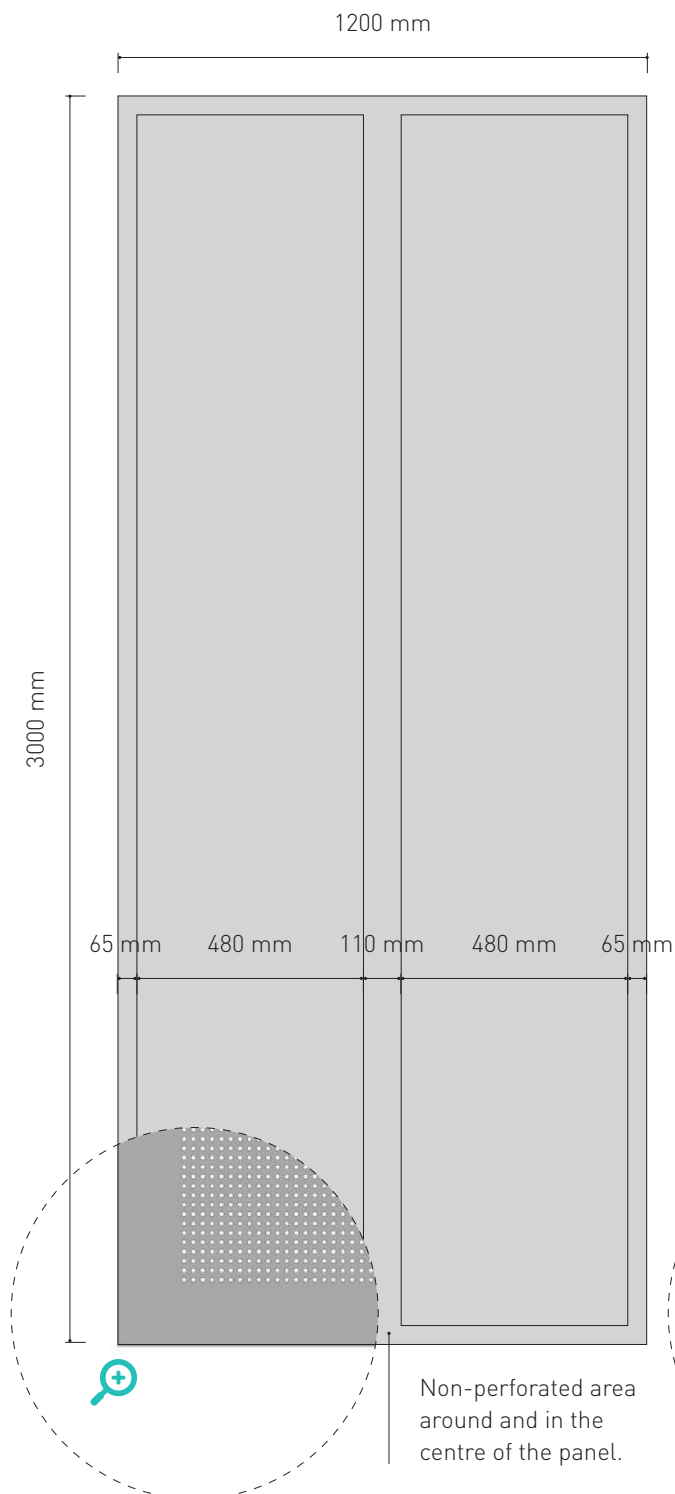
OPTIONS

Made-to-measure	on request
Flexible elements	on request



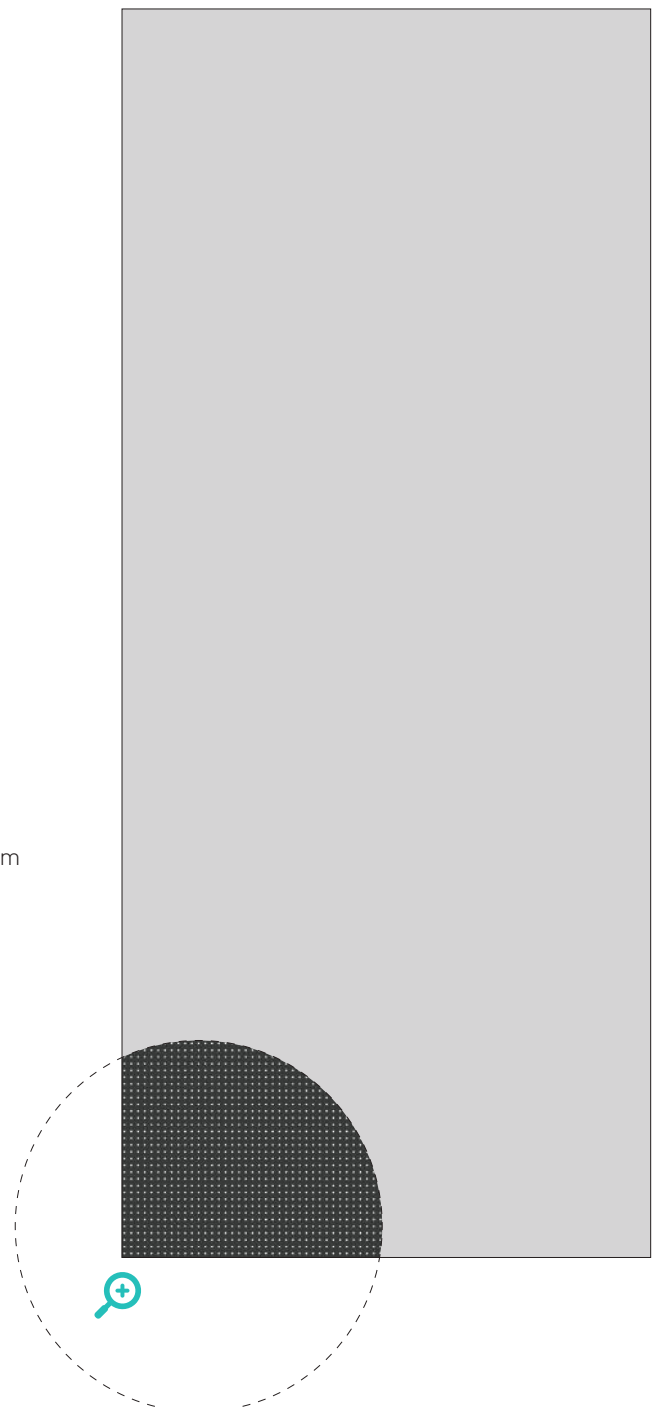
Full panel core detail drawing

Perforated area in the core (linear 8/8/6 mm)



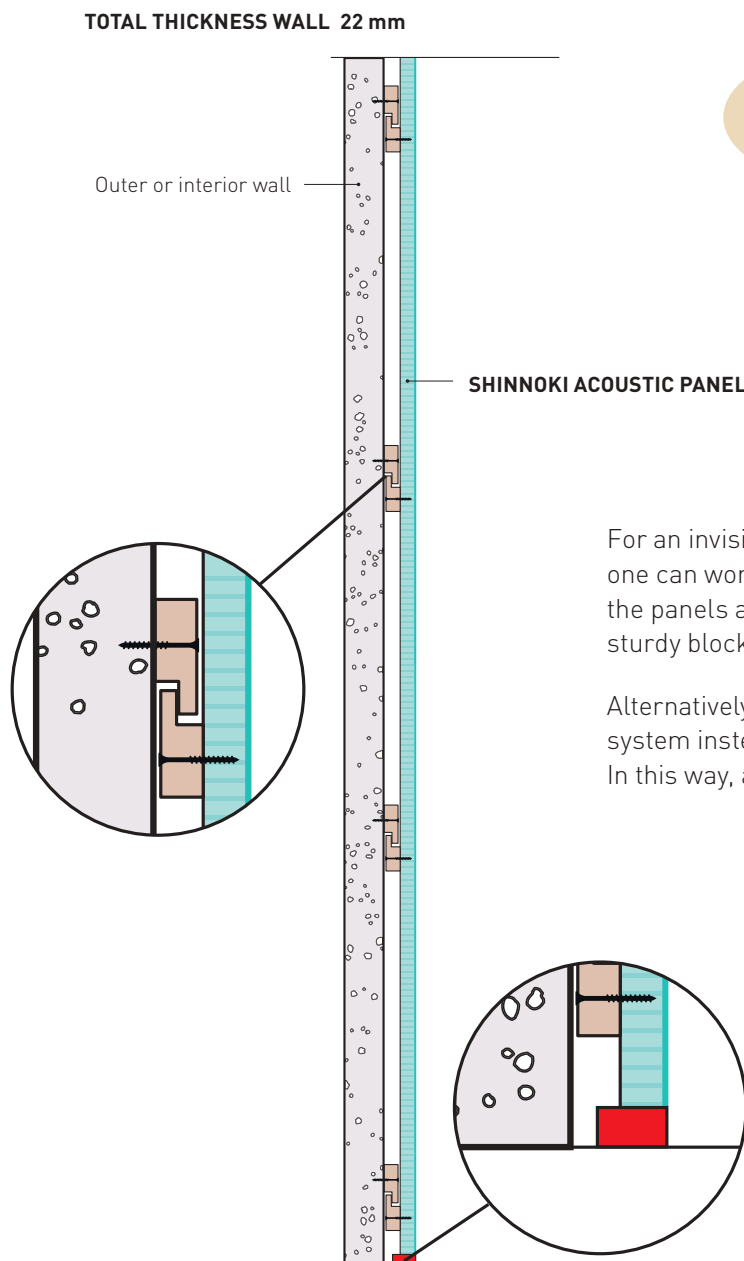
Visible side of top layer of full panel

Perforated top layer with-nano perforations (diagonally, 1.97/1.97/0.5 mm). Perforations standardly up to the edge of the panel. The perforations can differ slightly near the edge. (perforations are not perfectly aligned with board)



MOUNTED DIRECTLY ONTO A DRY WALL

Shinnoki acoustical panels can be mounted directly onto a supporting wall (brick, concrete) or reinforced plaster wall. Using this method, the overall thickness of the construction is limited while the acoustic system is retained. Use 5mm wooden or metal hook slats and provide sufficient support spots per board. Make sure the supporting wall is sturdy, dry and level.



TEST RESULTS
see page 8

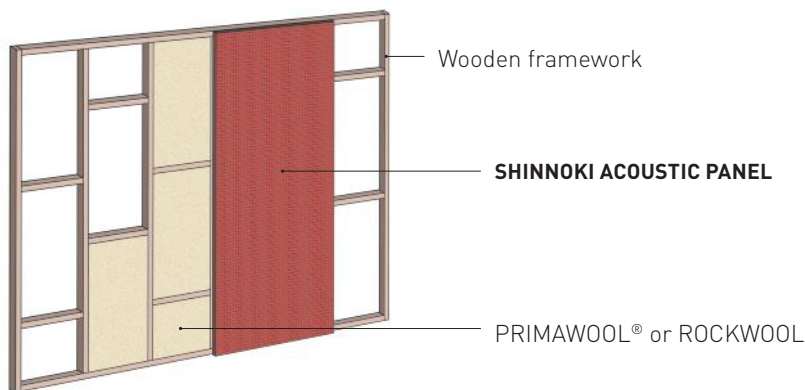
For an invisible connection with the ceiling, one can work with inverted hook slats as long as the panels are sufficiently supported below with sturdy blocks made of inert material.

Alternatively: hang the panels by means of the hook system instead of clamping and supporting them. In this way, a shadow gap is created at the top.

MOUNTED ON A WOODEN FRAME WITH ABSORBING CAVITIES

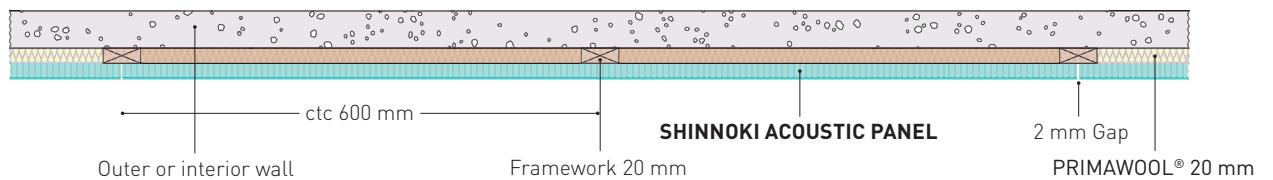
Installation on a single or double wooden frame (ctc 600 mm for panels of 1200 mm) can be done by means of invisible planks. These invisible planks are screwed onto the back of the panels and the acoustic absorbing panels are then hung onto the frame. The openings of the wooden framework must be filled with a sound absorbing material (e.g. Rockwool or Primawool) with a density of 40 kg/m³. The four sides of the panel must always be supported by the framework. The panels are mounted next to each other to a common underlying frame with a distance of 2 to 3 mm between them. We advise also to leave a space of 2.5 mm per meter in height in order to allow the construction to expand. Our guidelines for corner and plinth details can be found on Page 10. Our guidelines to store the panels can be found on Page 11.

On request you can obtain specific installation guidelines and certificates for: walls with an expected increased impact (sports rooms, party rooms, etc.) according to standard ETAG 003 and EN 13,964 and for ceiling installation. Made-to-size panels or flexible elements are available on request.

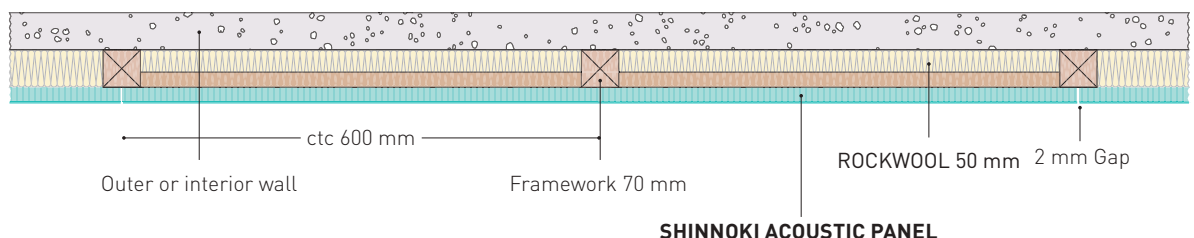


TEST RESULTS
see page 8

TOTAL THICKNESS WALL 37 mm



TOTAL THICKNESS WALL 87 mm



TEST SET-UP
IN LABORATORY:



Values according to
reverberation room test
EN ISO 354:2003 - EN ISO 11654:1997

	MOUNTED DIRECTLY ONTO A DRY WALL	MOUNTED ON A WOODEN FRAME	
	with a hollow space of 5 mm between the back of the panel and the wall (e.g. using wooden slats with miter cut).	with a thickness of 20 mm filled with 20 mm PRIMAWOOL with a density of 22,5 kg/m ³ .	with a thickness of 70 mm filled 50 mm of mineral wool with a density of 40 kg/m ³ .
TOTAL THICKNESS	22 mm	37 mm	87 mm
% PERFO TOP LAYER	5,8%	5,8%	5,8%
% PERFO CORE	44,2%	44,2%	44,2%
αW	0,35	0,65	0,75
F(HZ)	M	M	LM
SOUND CLASS	C	C	C
NRC	0,45	0,70	0,85
SAA	0,44	0,70	0,83
RESULT	Fastest installation method. Saves maximum amount of space. Good acoustical performance.	A balanced solution maximizing acoustical performance with limited use of space.	Highest level of acoustical performance, but requires more space.



TECHNICAL DATA SHEET PRIMAWOOL®

Description

- > Low density absorber
- > 100% polyester fibre
- > 1-sided drum membrane: white
- > Colour of polyester fibre: white
- > Applications: walls, ceilings and baffle filling

Features

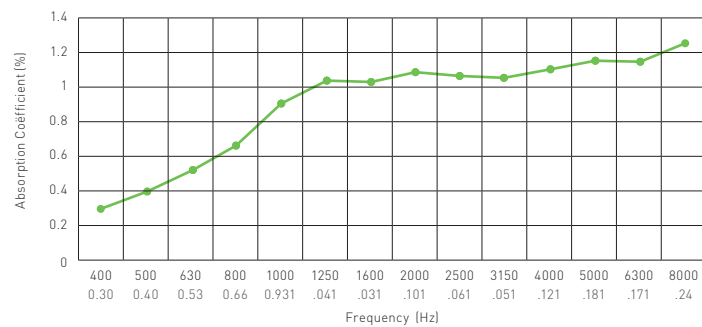
- > 100 % recyclable PET
- > Inodorous
- > No emission of volatile organic compounds (VOCs) (A+ level)
- > Moisture and rot resistant
- > Non irritating for skin and eyes
- > European fire class B-s2-d0

Figures

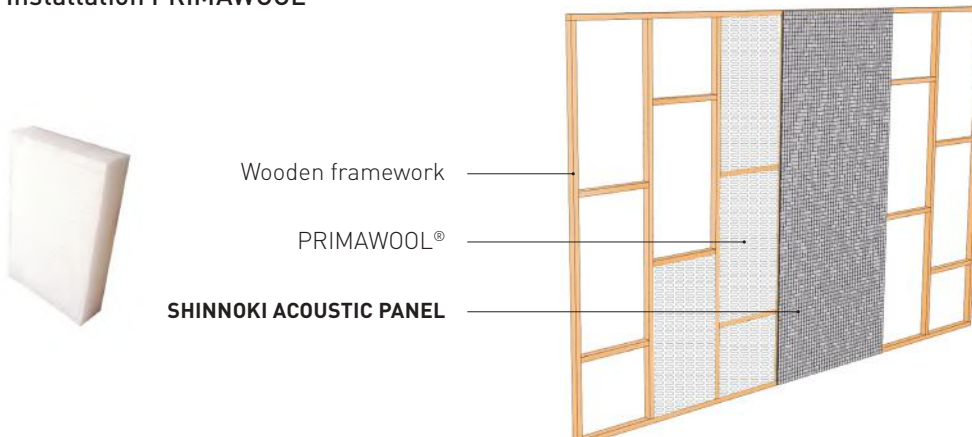
Density ISO 9073-1	450 gr/m ²
Thickness E0 (without load) ISO 9073-2	22 mm (measured without package)
Thickness E1 (load of 50g/50cm ²)	21 mm (measured without package)
Thickness E10 (load of 500g/500cm ²)	13 mm (measured without package)
Inflammability FMVSS 302	<100 mm/min (self-extinguishing)
Dimensions of roll (length / width / width tolerances)	30 mm / 600 mm / -0 +2 cm
Package	36 m ² (2 separate rolls of 30 m)

Acoustic features

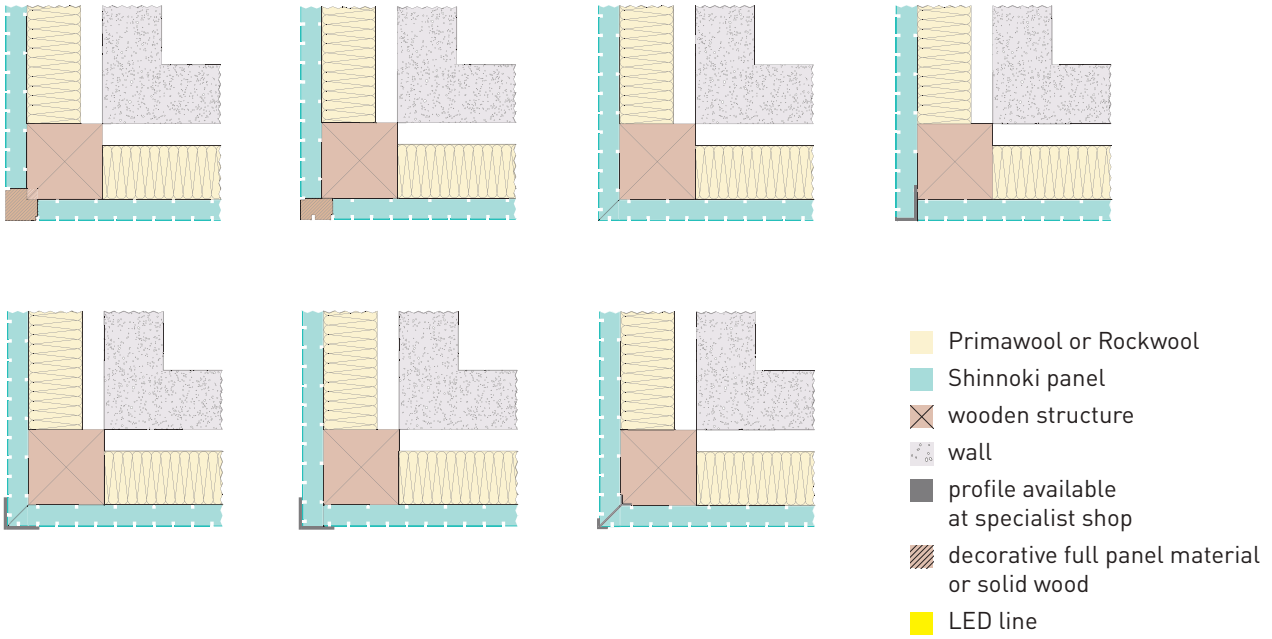
Absorption coefficient is determined by measuring a sample of PRIMAWOOL® in the reverberation room.



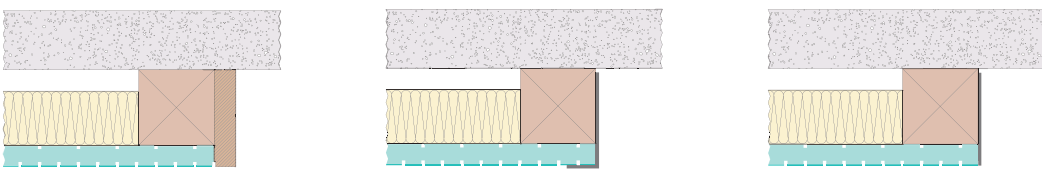
Installation PRIMAWOOL®



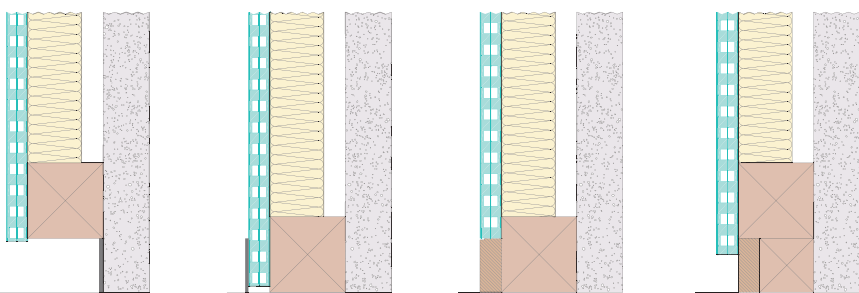
Corner solutions



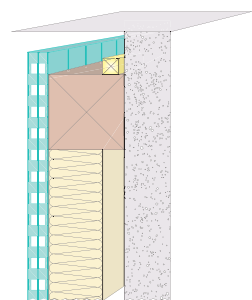
Wall connections



Floor connections

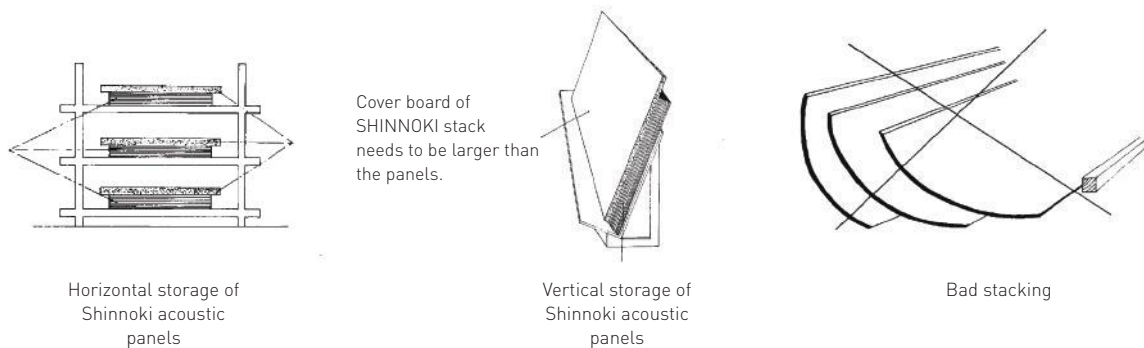


Ceiling LED line



STORAGE

For conditioning, we recommend to store the panels in the room at least 48 hours before mounting them. These panels are by nature and composition only to be mounted in a well-conditioned room with a relative humidity between 35 and 55 % and a temperature between 14 and 30 °C. Do not install the panels until the building is closed and all work involving water or wet substances such as concrete, masonry, plaster, drywall and paint is completed.



Store in a dry environment at least 15 cm above ground on a stable framework or blocks. Protect edges and corners and cover the surfaces. Be aware of sharp edges when manipulating and carry the panels with two people.

MAINTENANCE

Shinnoki acoustical panels are finished with 6 layers acrylate urethane lacquer and thus easy to maintain. Normal maintenance involves no more than removing dust with a soft, dry cloth. A slightly damp cloth can also be used, but be careful not to use too much water.

If liquids are spilled, it is recommended that they should be dried off immediately to avoid damp patches being left. Tough dirt can be removed using water and a mild cleaning agent or a detergent. Never use a cleaner based on acetone or ethyl butyl acetate; these substances can leave marks that cannot be removed. Wax and oil can also cause damage.

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Specification Support by



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