



FINNFOREST SONEX

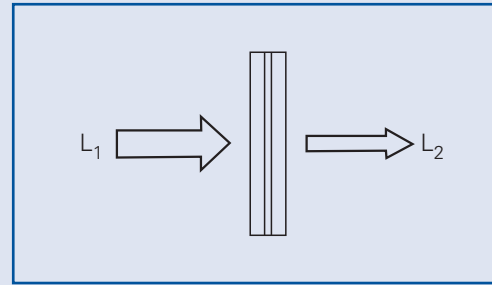
SOUND INSULATION PLYWOOD PANEL

finnforest

Finnforest Sonex is a birch plywood sandwich panel with good sound-absorbing properties. Its main end use is in transportation industry for example bus floors. Sonex panel is a composite structure made out of veneers and sound absorbing material. Sonex panels can be easily machined and surface treated like standard birch plywood.

Compared to standard birch plywood the sound pressure level can be reduced to as much as half with special Finnforest Sonex structures.

The basic measure of loudness is the sound pressure level L which is recorded in decibels (dB). The sound pressure level is logarithmic; the sound pressure is decreased to half when the sound insulation value is improved by 6 dB. Specialist reports indicate that when a noise level is reduced by 10dB, the human ear perceives it to be half as loud.



APPLICATIONS

Sound absorbing panels are available in Sonex and Sonex Light. Main end uses for Finnforest Sonex panels are in demanding constructions where strength properties are essential. Sonex Light panel is an ideal solution for light structures where low weight is a priority.

Finnforest Sonex panels are well suited for walls and floors of passenger vehicles, such as train and busses, to insulate the passengers from noise. Finnforest Sonex can also be used in partition walls requiring high acoustic insulation. The Sonex panel is suitable for EC5 service classes 1 and 2.



STRENGTH PROPERTIES

Strength properties for Sonex panels are practically the same as for standard birch plywood. Finnforest Sonex Light panels have lower strength properties than standard birch plywood.

EMISSIONS

The amount of formaldehyde emitted from the plywood, determined according to EN 717-2, is approximately 0.3 mg HCHO/h.m³ (Class E1 requirement 3.5 HCHO/h.m³). Finnforest Sonex meets the Class E1 requirement.

FIRE CLASSIFICATION

- DIN 5510 Part 2: S3, SR2, ST2 (film-faced Sonex plywood –requirement for railways)
- Directive 95/28/EC (requirement for buses)
- FMVSS 302 (1-10-93 Edition) (requirement for buses)

BONDING

Veneers are bonded with phenolic resin adhesive (WBP, BFU, AW, exterior) which is resistant to weather and boiling water and meet the following international bonding standards:

- SFS-EN 314-2 / Class 3
- BS 6566 Part 8 / type WBP (former)
- DIN 68705 / BFU 100

The Finnforest Sonex sandwich structure panel meets norm EN 312-2 requirements when dry, but not after 72 hours boiling.

QUALITY CONTROL

In addition to Finnforest's own quality control, the Technical Research Centre of Finland (VTT) oversees production operations and the internal quality control at Finnforest plywood mills. External plywood quality control will continue to be conducted in accordance with CE rules. The EN ISO 9001:2000 Quality Management system is applied.

THE ENVIRONMENT

Finnforest plywood is manufactured from wood which is a renewable natural resource. Finnforest plywood has the right to use the PEFC-logo, which ensures that the raw material is sourced from sustainable managed forests.

PRODUCT SIZES AND SOUND REDUCTION INDEX

Product	Size mm	Thickness mm	Sound reduction index R _w dB	Weight kg/m ²
Finnforest Sonex	1220/1250 x 2440/2500 1500 x 2500/3000	11	30	12.1
		16.5	33	18.1
		18	32	17.5
		21	32	19.7
Finnforest Sonex Light	1220/1250 x 2440/2500	16.5	31	11.5
		22	31	15.8

The sound reduction index R was measured in accordance with EN ISO 140-3:1995 [1] and the weighted sound reduction index R_w was determined in accordance with EN ISO 717-1:1996 [2].

Thickness tolerance ± 1.0 mm

Available by special order: Special structures (higher sound insulation properties), other thicknesses and sizes and different overlays.

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Finnforest is a wood products company delivering service-oriented solutions developed in collaboration with its customers, especially in the areas of industrial construction and transportation industry as well as home and lifestyle. Our premium solutions are based on ecological, high quality Nordic wood raw material, and by using them our customers can contribute to better environment and living. Our sales total 1.4 billion euros and we employ 4.500 professionals in 20 countries. We comprise one of the corAe businesses of the Finnish forest industry group Metsäliitto.

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