

Use of CEWOOD panels for maximum sound absorption

The most effective sound absorption can be achieved by adding a layer of mineral wool behind CEWOOD panels. In such multi-layer applications, CEWOOD panels significantly lower sound reverberation time, increase acoustic comfort and improve speaker clarity in public spaces, such as educational institutions, offices, and conference halls. In production areas, CEWOOD panels effectively reduce acoustic pressure in the high frequency range, thus improving the working environment.

Natural and simple

CEWOOD wood wool panels offer multiple important advantages:

1. A wide range of design options — various colour shades, wood wool widths and surface finishes — allows you to adapt the panels to any interior style. In addition, it is possible to achieve the necessary acoustic effect with less coverage thus leading to higher flexibility in ceiling and wall finishing.
2. Simple mounting — structures are easy to design and install. These solutions have been tested in practice, so the mounting process will be simpler and faster.
3. A cost-effective solution — efficient designs made from affordable, tested materials will be more cost-effective than specialised acoustic panels.

Certified efficiency

More than 20 different constructions with CEWOOD panels have been tested in a reverberation chamber tests and reached the highest absorption class A (90–100% sound wave absorption).

More information on these class A designs, as well as lower absorption class solutions, is available in the section "Downloads" of the website cewood.com.



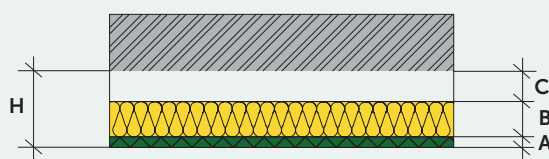
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Office

Use of CEWOOD panels for maximum sound absorption

Mounting with screws onto the ceiling structure with an air gap

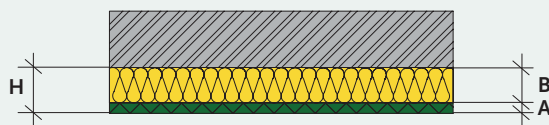


Panel thickness (mm)	Description	α_w	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	Frequency					
								125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
25	CEWOOD Panel 25 mm, B1, mineral wool 40 mm, air gap 135 mm	● 1,00	A	200	25	40	135	0,55	0,95	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 50 mm, air gap 125 mm	● 1,00	A	200	25	50	125	0,50	1,00	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 40 mm, air gap 85 mm	● 1,00	A	150	25	40	85	0,45	0,95	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, A2, mineral wool 40 mm, air gap 85 mm	● 1,00	A	150	25	40	85	0,45	0,95	1,00	1,00	0,90	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 20 mm, air gap 180 mm	● 0,95	A	225	25	20	180	0,60	0,95	0,95	0,95	0,95	0,90
	CEWOOD Panel 25 mm, B1, mineral wool 100 mm, air gap 75 mm	● 0,95	A	200	25	100	75	0,70	1,00	1,00	0,95	0,90	1,00
	CEWOOD Panel 25 mm, A2, mineral wool 100 mm, air gap 75 mm	● 0,95	A	200	25	100	75	0,70	1,00	1,00	0,90	0,90	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 30 mm, air gap 70 mm	● 0,90	A	125	25	30	70	0,35	0,70	1,00	0,90	0,85	0,90
	CEWOOD Panel 25 mm, A2, mineral wool 30 mm, air gap 70 mm	● 0,90	A	125	25	30	70	0,35	0,70	1,00	0,90	0,80	0,90
35	CEWOOD Panel 35 mm, B1, mineral wool 20 mm, air gap 100 mm	● 1,00	A	155	35	20	100	0,35	0,80	1,00	1,00	0,90	1,00
	CEWOOD Panel 35 mm, B1, mineral wool 30 mm, air gap 70 mm	● 0,90	A	135	35	30	70	0,35	0,70	1,00	0,90	0,85	0,90

● – mineral wool ~70 kg/m³ ● – mineral wool ~30 kg/m³

Use of CEWOOD panels for maximum sound absorption

Mounting with screws onto the ceiling structure without an air gap

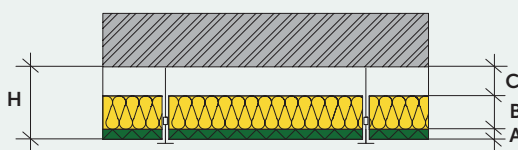


Panel thickness (mm)	Description	α_w	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	Frequency					
								125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
25	CEWOOD Panel 25 mm, B1, mineral wool 50 mm ●	1,00	A	75	25	50	0	0,30	0,85	1,00	0,95	0,95	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 100 mm ●	1,00	A	125	25	100	0	0,60	1,00	1,00	1,00	0,90	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 40 mm ●	1,00	A	65	25	40	0	0,25	0,75	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, A2, mineral wool 40 mm ●	0,95	A	65	25	40	0	0,25	0,80	1,00	0,95	0,85	1,00
	CEWOOD Panel 25 mm, A2, mineral wool 100 mm ●	0,95	A	125	25	100	0	0,65	1,00	1,00	0,95	0,90	1,00
35	CEWOOD Panel 35 mm, B1, mineral wool 40 mm ●	1,00	A	75	35	40	0	0,25	0,80	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, A2, mineral wool 40 mm ●	1,00	A	75	35	40	0	0,25	0,80	1,00	1,00	0,90	1,00

● – mineral wool ~70 kg/m³ ● – mineral wool ~30 kg/m³

Use of CEWOOD panels for maximum sound absorption

Mounting in suspended ceiling structures with an air gap

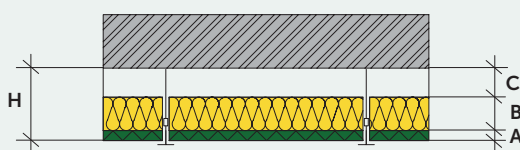


Panel thickness (mm)	Description	α_w	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	Frequency					
								125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
15	CEWOOD Panel 15 mm, B1, mineral wool 20 mm, air gap 180 mm	● 0,90	A	215	15	20	180	0,35	0,70	0,90	0,90	0,85	0,90
	CEWOOD Panel 15 mm, B1, mineral wool 50 mm, air gap 150 mm	● 0,90	A	215	15	50	150	0,50	0,80	0,95	0,90	0,85	0,90
25	CEWOOD Panel 25 mm, B1, mineral wool 40 mm, air gap 135 mm	● 1,00	A	200	25	40	135	0,55	0,95	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 50 mm, air gap 125 mm	● 1,00	A	200	25	50	125	0,50	1,00	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 40 mm, air gap 85 mm	● 1,00	A	150	25	40	85	0,45	0,95	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, A2, mineral wool 40 mm, air gap 85 mm	● 1,00	A	150	25	40	85	0,45	0,95	1,00	1,00	0,90	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 100 mm, air gap 75 mm	● 0,95	A	200	25	100	75	0,70	1,00	1,00	0,95	0,90	1,00
	CEWOOD Panel 25 mm, A2, mineral wool 100 mm, air gap 75 mm	● 0,95	A	200	25	100	75	0,70	1,00	1,00	0,90	0,90	1,00
	CEWOOD Panel 25 mm, B1, mineral wool 20 mm, air gap 180 mm	● 0,90	A	225	25	20	180	0,35	0,70	0,90	0,90	0,85	0,90
	CEWOOD Panel 25 mm, B1, mineral wool 50 mm, air gap 150 mm	● 0,90	A	225	25	50	150	0,55	0,80	0,95	0,90	0,85	0,95

● – mineral wool ~70 kg/m³ ● – mineral wool ~30 kg/m³

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Mounting in suspended ceiling structures with an air gap



Panel thickness (mm)	Description	α_w	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	Frequency					
								125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
35	CEWOOD Panel 35 mm, B1, mineral wool 20 mm, air gap 180 mm	● 0,90	A	235	35	20	180	0,45	0,70	0,90	0,85	0,85	1,00
	CEWOOD Panel 35 mm, B1, mineral wool 50 mm, air gap 150 mm	● 0,90	A	235	35	50	150	0,55	0,85	0,95	0,85	0,85	0,95

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