

Cewood Acoustic panels



**CHRISTIAN
BERNER**

Expect more

Cewood Acoustic panels

Utgave Mars 2020



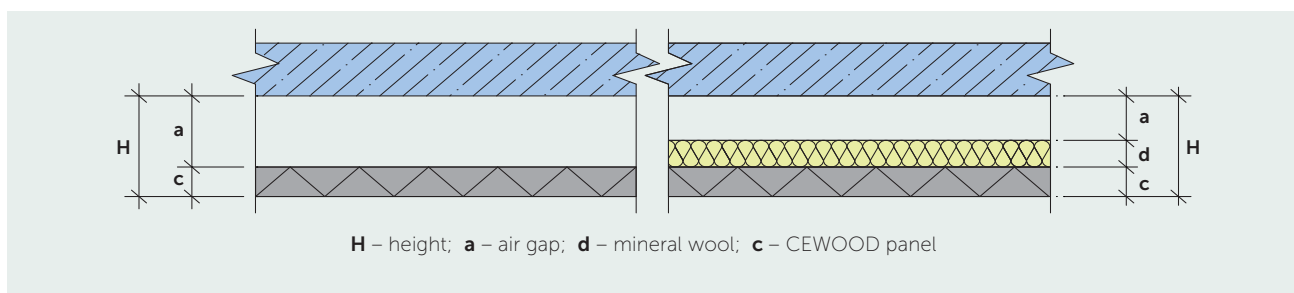
Building for comfort and health

CEWOOD Acoustic panels are a natural product made in Latvia. Panels are friendly both to environment and human health, they're made from premium quality wood wool by adding white cement and water.

CEWOOD panels are comfortable and resistant. They help to maintain a pleasant microclimate characteristic to wood in the facilities.

Practical sound absorption coefficient in the p octave band according to standard EN ISO 354,

Extended sound absorption coefficient α_w and sound absorption class according to standard EN ISO 11654:1997



A particularly effective usage of the panels is sound absorbing structures in large rooms for reducing the space's sound reverberation time and improving the working environment. CEWOOD panels can be used for making plate-shaped screens with a pronounced absorbing nature for reducing the noise emission of equipment in the range of high-tone frequencies. An even more effective acoustic solution is to create three-dimensional finishing elements, such as pyramids, which

exhibit a much higher absorption coefficient value, thanks to sound diffraction around the edges.

Panels, made from 3 mm wide wood wool and with higher density, better ensure the sound absorption at the low frequencies. In turn, panels made from 1 mm and 1.5 mm wide wood wool have better absorption properties in the high frequency range. The optimal sound absorption solution can be achieved by combining CEWOOD panels with a mineral wool insulation layer.

Cewood acoustic panels

CEWOOD panels on lath construction

Description	Total height H, mm	Air gap a, mm	Mineral wool d, mm	CEWOOD panel c, mm	Frequencies, Hz						Absorption coefficient α_w	Absorption class
					125	250	500	1000	2000	4000		
35 mm CEWOOD panel, 30 mm mineral wool, 70 mm air gap	135	70	30	35	0,35	0,70	1,00	0,90	0,85	0,90	0,90	A
35 mm CEWOOD panel, without mineral wool, 100 mm air gap	135	100	0	35	0,15	0,35	0,70	0,70	0,70	0,85	0,65	C
25 mm A2 CEWOOD panel, 30 mm mineral wool, 70 mm air gap	125	70	30	25	0,35	0,70	1,00	0,90	0,80	0,90	0,90	A
25 mm A2 CEWOOD panel, without mineral wool, 100 mm air gap	125	100	0	25	0,15	0,35	0,65	0,60	0,65	0,80	0,60	C
25 mm CEWOOD panel, 30 mm mineral wool, 70 mm air gap	125	70	30	25	0,35	0,70	1,00	0,90	0,85	0,90	0,90	A
25 mm CEWOOD panel, without mineral wool, 100 mm air gap	125	100	0	25	0,15	0,30	0,65	0,60	0,65	0,80	0,60	C

CEWOOD panels in suspended ceiling systems (T-24 profiles)

Description	Total height H, mm	Air gap a, mm	Mineral wool d, mm	CEWOOD panel c, mm	Frequencies, Hz						Absorption coefficient α_w	Absorption class
					125	250	500	1000	2000	4000		
35 mm CEWOOD panel, 50 mm mineral wool, 150 mm air gap	235	150	50	35	0,55	0,85	0,95	0,85	0,85	0,95	0,90	A
25 mm CEWOOD panel, 50 mm mineral wool, 150 mm air gap	225	150	50	25	0,55	0,80	0,95	0,90	0,85	0,95	0,90	A
15 mm CEWOOD panel, 50 mm mineral wool, 150 mm air gap	215	150	50	15	0,50	0,80	0,95	0,90	0,85	0,90	0,90	A
15 mm CEWOOD panel, 20 mm mineral wool, 180 mm air gap	215	180	20	15	0,35	0,70	0,90	0,90	0,85	0,90	0,90	B
25 mm CEWOOD panel, 20 mm mineral wool, 180 mm air gap	225	180	20	25	0,35	0,70	0,90	0,90	0,85	0,90	0,90	A
35 mm CEWOOD panel, 20 mm mineral wool, 180 mm air gap	235	180	20	35	0,45	0,70	0,90	0,85	0,85	1,00	0,90	A
35 mm CEWOOD panel, without mineral wool, 200 mm air gap	235	200	0	35	0,30	0,50	0,60	0,60	0,75	0,90	0,65	C
25 mm CEWOOD panel, without mineral wool, 200 mm air gap	225	200	0	25	0,25	0,45	0,55	0,55	0,70	0,85	0,60	C
15 mm CEWOOD panel, without mineral wool, 200 mm air gap	215	200	0	15	0,20	0,45	0,55	0,55	0,65	0,80	0,60	D

Cewood acoustic panels

CEWOOD panels – different constructions

Description	Total height H, mm	Air gap a, mm	Mineral wool d, mm	CEWOOD panel c, mm	Frequencies, Hz						Absorption coefficient α_w	Absorption class
					125	250	500	1000	2000	4000		
25 mm CEWOOD panel, without mineral wool, 60 mm air gap	85	60	0	25	0,10	0,30	0,55	0,60	0,50	0,60	0,55	D
25 mm CEWOOD panel, without mineral wool, 200 mm air gap	225	200	0	25	0,25	0,50	0,55	0,50	0,60	0,65	0,55	D
50 mm CEWOOD panel, without mineral wool, 200 mm air gap	250	200	0	50	0,40	0,60	0,55	0,65	0,70	0,70	0,65	C
25 mm CEWOOD panel, with 50 mm mineral wool, 10 mm air gap	85	10	50*	25	0,40	0,79	0,78	0,76	0,73	0,70	0,80	B
25 mm CEWOOD panel, with 100 mm mineral wool, 100 mm air gap	225	100	100*	25	0,79	0,72	0,73	0,81	0,78	0,72	0,80	B
25 mm CEWOOD panel, with 50 mm mineral wool, 150 mm air gap	225	150	50*	25	0,52	0,81	0,74	0,87	0,77	0,73	0,80	B
25 mm CEWOOD panel, with 30 mm mineral wool, without air gap	55	0	30**	25	0,25	0,55	1,00	0,95	0,85	0,85	0,85	B
25 mm CEWOOD panel, with 50 mm mineral wool, without air gap	75	0	50**	25	0,35	0,70	1,00	0,95	0,85	0,95	0,90	A
25 mm CEWOOD panel, without mineral wool, 50 mm air gap	75	50	0	25	0,10	0,25	0,55	0,65	0,55	0,65	0,50	D
15 mm CEWOOD panel, with 50 mm mineral wool, without air gap	65	0	50**	15	0,30	0,65	1,00	0,85	0,75	0,80	0,85	B
15 mm CEWOOD panel, without mineral wool, 50 mm air gap	65	50	0	15	0,10	0,20	0,50	0,65	0,55	0,65	0,50	D

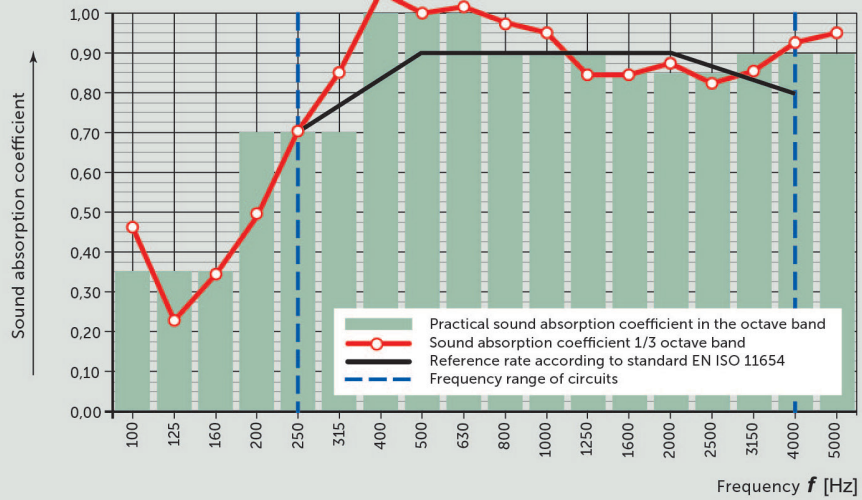
* mineral wool, approx. 30 kg/m³; ** mineral wool, approx. 90 kg/m³.

Cewood acoustic panels

Frequency f, Hz	α_s 1/3 oct. [dB]	α_p 1 oct. [dB]
50	-	-
63	-	-
80	-	-
100	0,46	-
125	0,22	0,35
160	0,34	-
200	0,49	-
250	0,70	0,70
315	0,85	-
400	1,03	-
500	0,99	1,00
630	1,01	-
800	0,97	-
1000	0,95	0,90
1250	0,85	-
1600	0,85	-
2000	0,87	0,85
2500	0,82	-
3150	0,84	-
4000	0,93	0,90
5000	0,95	-
6300	-	-
8000	-	-
10000	-	-

CEWOOD panels on lath construction

25 mm CEWOOD panel, 30 mm mineral wool, 70 mm air gap

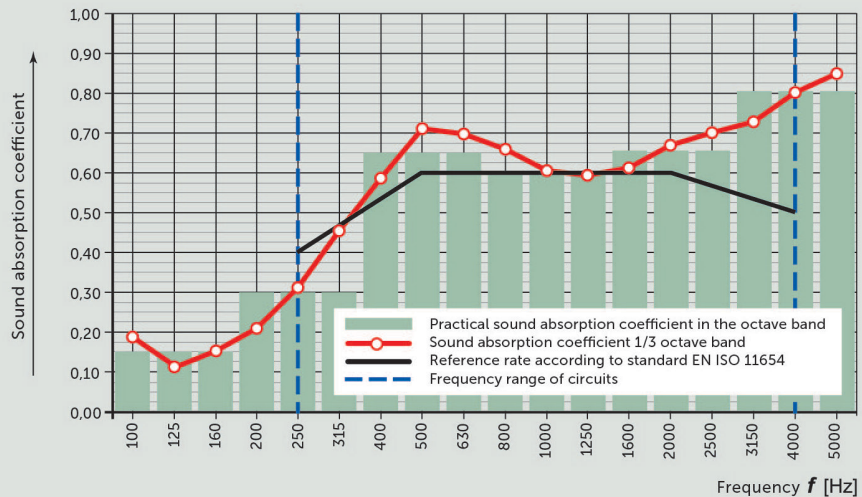


Practical sound absorption coefficient according to standard EN ISO 11654, α_w : **0,90**
 Sound absorption class according to standard EN ISO 11654: **A**

Frequency f, Hz	α_s 1/3 oct. [dB]	α_p 1 oct. [dB]
50	-	-
63	-	-
80	-	-
100	0,19	-
125	0,11	0,15
160	0,14	-
200	0,21	-
250	0,31	0,30
315	0,45	-
400	0,58	-
500	0,71	0,65
630	0,69	-
800	0,66	-
1000	0,60	0,60
1250	0,59	-
1600	0,61	-
2000	0,67	0,65
2500	0,70	-
3150	0,73	-
4000	0,80	0,80
5000	0,85	-
6300	-	-
8000	-	-
10000	-	-

CEWOOD panels on lath construction

25 mm CEWOOD panel, without mineral wool, 100 mm air gap

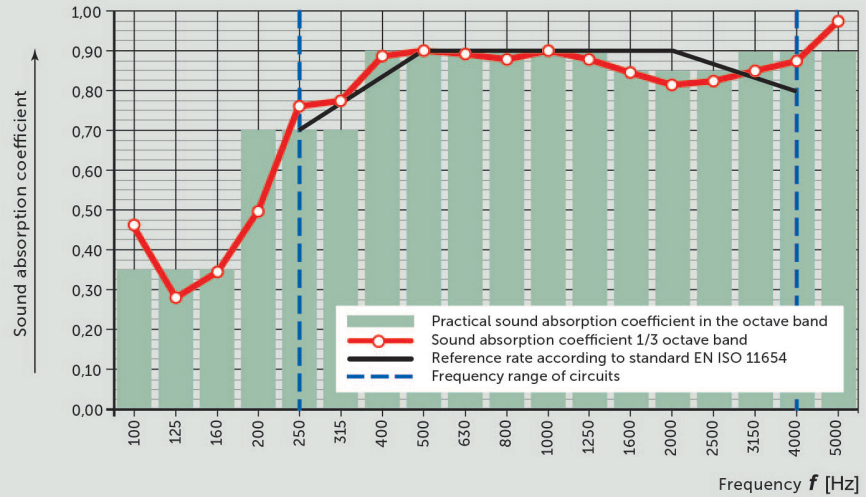


Practical sound absorption coefficient according to standard EN ISO 11654, α_w : **0,60**
 Sound absorption class according to standard EN ISO 11654: **C**

Cewood acoustic panels

Frequency f, Hz	α_s 1/3 oct.	α_p 1 oct.
[Hz]	[dB]	[dB]
50	-	-
63	-	-
80	-	-
100	0,46	-
125	0,28	0,35
160	0,34	-
200	0,50	-
250	0,76	0,70
315	0,78	-
400	0,89	-
500	0,90	0,90
630	0,89	-
800	0,88	-
1000	0,90	0,90
1250	0,88	-
1600	0,85	-
2000	0,82	0,85
2500	0,82	-
3150	0,85	-
4000	0,87	0,90
5000	0,97	-
6300	-	-
8000	-	-
10000	-	-

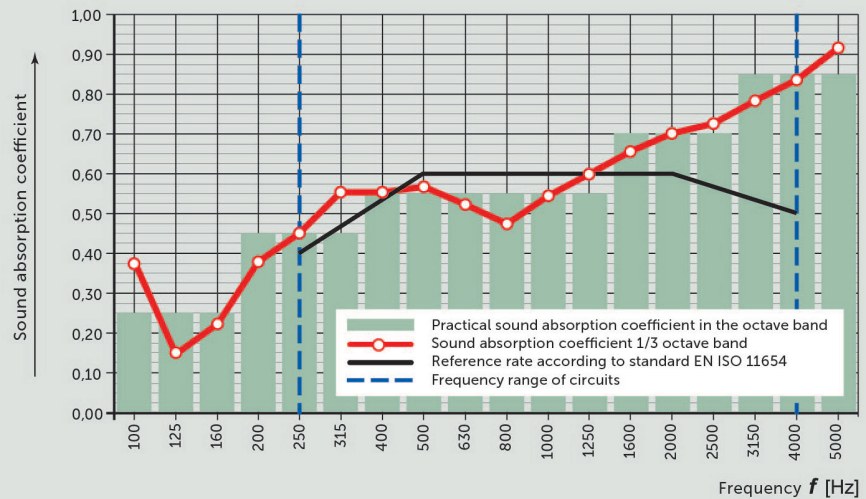
CEWOOD panels in suspended ceiling systems (T-24 profiles)
25 mm CEWOOD panel, 20 mm mineral wool, 180 mm air gap



Practical sound absorption coefficient according to standard EN ISO 11654, α_w : **0,90**
Sound absorption class according to standard EN ISO 11654: **A**

Frequency f, Hz	α_s 1/3 oct.	α_p 1 oct.
[Hz]	[dB]	[dB]
50	-	-
63	-	-
80	-	-
100	0,37	-
125	0,14	0,25
160	0,22	-
200	0,38	-
250	0,45	0,45
315	0,55	-
400	0,56	-
500	0,57	0,55
630	0,52	-
800	0,47	-
1000	0,55	0,55
1250	0,61	-
1600	0,66	-
2000	0,71	0,70
2500	0,73	-
3150	0,78	-
4000	0,84	0,85
5000	0,92	-
6300	-	-
8000	-	-
10000	-	-

CEWOOD panels in suspended ceiling systems (T-24 profiles)
25 mm CEWOOD panel, without mineral wool, 200 mm air gap



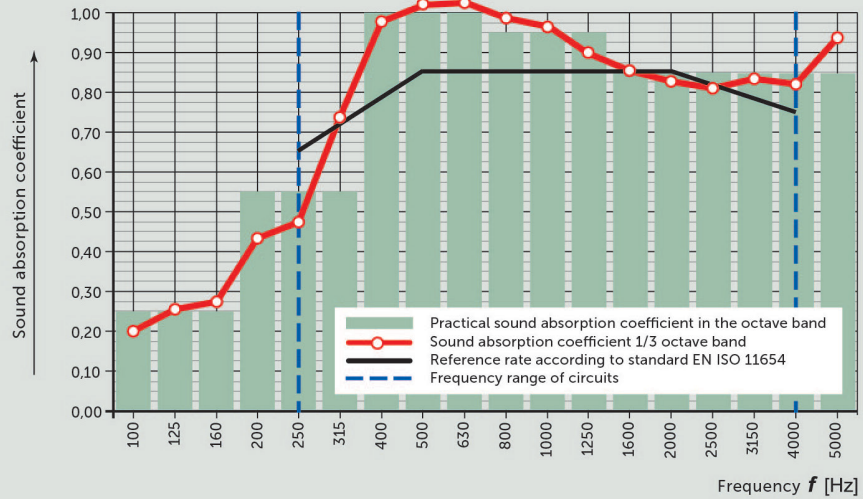
Practical sound absorption coefficient according to standard EN ISO 11654, α_w : **0,60**
Sound absorption class according to standard EN ISO 11654: **C**

Cewood acoustic panels

Frequency f, Hz	α_s 1/3 oct.	α_p 1 oct.
50	-	-
63	-	-
80	-	-
100	0,20	-
125	0,25	0,25
160	0,27	-
200	0,43	-
250	0,47	0,55
315	0,73	-
400	1,00	-
500	1,05	1,00
630	1,06	-
800	0,99	-
1000	0,96	0,95
1250	0,90	-
1600	0,85	-
2000	0,83	0,85
2500	0,81	-
3150	0,84	-
4000	0,82	0,85
5000	0,93	-
6300	-	-
8000	-	-
10000	-	-

CEWOOD panels – different constructions

25 mm CEWOOD panel, with 30 mm mineral wool, without air gap

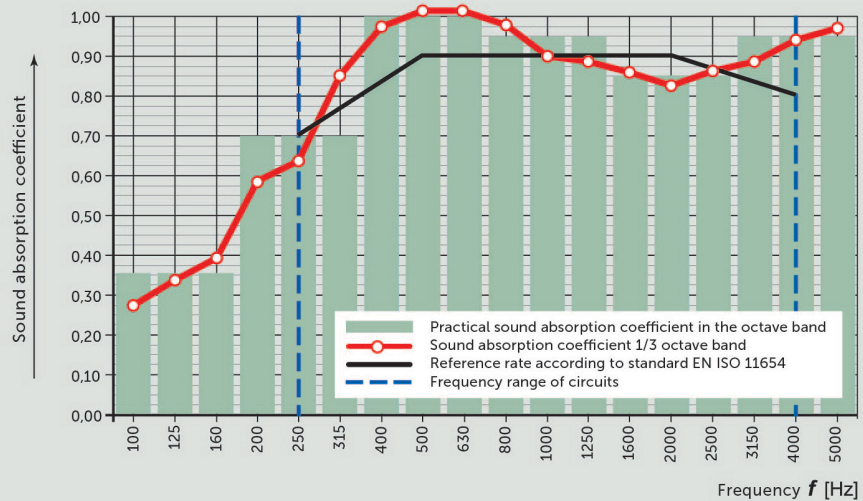


Practical sound absorption coefficient according to standard EN ISO 11654, α_w : **0,85**
Sound absorption class according to standard EN ISO 11654: **B**

Frequency f, Hz	α_s 1/3 oct.	α_p 1 oct.
50	-	-
63	-	-
80	-	-
100	0,27	-
125	0,33	0,35
160	0,39	-
200	0,58	-
250	0,63	0,70
315	0,85	-
400	1,10	-
500	1,09	1,00
630	1,09	-
800	1,00	-
1000	0,90	0,95
1250	0,88	-
1600	0,86	-
2000	0,82	0,85
2500	0,86	-
3150	0,89	-
4000	0,94	0,95
5000	0,97	-
6300	-	-
8000	-	-
10000	-	-

CEWOOD panels – different constructions

25 mm CEWOOD panel, with 50 mm mineral wool, without air gap



Practical sound absorption coefficient according to standard EN ISO 11654, α_w : **0,90**
Sound absorption class according to standard EN ISO 11654: **A**



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Expect more