



# CELENIT ABE

## Technical data sheet



Thermal and acoustic insulation board, consisting of mineralized extra-thin fir wood wool bound with white Portland cement. Wood wool is 1 mm wide. High quality boards for design acoustic absorption systems.

It complies with EN 13168 and EN 13964.

The boards are certified by ANAB-ICEA and natureplus for eco-compatibility of materials and manufacturing process. CELENIT ABE is PEFC™ certified. Also available with FSC® certification.

Also available with grey Portland cement [CELENIT AE].

### Edges detail

D - S4 - RD  
DT - T - RDT - RST - PS - PM

### Colours

natural or painted

### Applications

false ceilings, wall coverings, baffles and acoustic rafts, design solutions

## Technical data

Standard	EN 13168 - EN 13964			
Designation code CELENIT ABE	WW-EN13168-L3-W2-T2-S2-CS(10)300-CI3			
Designation code CELENIT AE	WW-EN13168-L3-W2-T2-S2-CS(10)300-CI1			
Length x Width [mm]	2400x600 - 2000x600 - 1200x600 - 600x600			
Thickness [mm]	15	25	35	
Weight [kg/m <sup>2</sup> ]	7.8	12.0	15.0	
Declared thermal conductivity $\lambda_D$ [W/mK]	0.075			
Declared thermal resistance $R_D$ [m <sup>2</sup> K/W]	0.20	0.30	0.45	
Compressive stress at 10% deformation $\sigma_{10}$ [kPa]	≥ 300			
Water vapour transmission $\mu$	5			
Specific heat $c_p$ [kJ/kgK] <sup>1</sup>	1.81			
Reaction to fire <sup>2</sup>	Euroclass B-s1, d0			
Chloride content CELENIT ABE [%]	≤ 0.06			
Chloride content CELENIT AE [%]	≤ 0.35			
Sound absorption			$\alpha_w$ up to 1.00 - NRC up to 0.95	
Durability			Class C	
Light reflection CELENIT ABE [%]			50.7 - 74.0 (painted white 05/15)	
Light reflection CELENIT AE [%]			31.2	
Release of formaldehyde			Class E1	
Release of asbestos			it does not contain asbestos	

<sup>1</sup> Certified by the University of Bologna - LEBSC no. 809 | rev. 07.05.2009

<sup>2</sup> The reaction to fire does not change for painted products

## Logistic data

Dimensions [mm]	Pallet	15 mm	25 mm	35 mm
boards: 2400x600	boards per pallet	130	88	60
pallet: 2400x1200	m <sup>2</sup> per pallet	187.20	126.72	86.40
boards: 2000x600	boards per pallet	130	88	60
pallet: 2000x1200	m <sup>2</sup> per pallet	156.00	105.60	72.00
boards: 1200x600	boards per pallet	130	88	60
pallet: 1200x1200	m <sup>2</sup> per pallet	93.60	63.36	43.20
boards: 600x600	boards per pallet	260	176	120
pallet: 1200x1200	m <sup>2</sup> per pallet	93.60	63.36	43.20

## Certifications

ISO 9001:2015 no. 1351  
ANAB no. EDIL 2009\_004  
NATUREPLUS no. 1007-1511-134-1  
EPD® S-P-02275  
FSC® no. ICILA-COC-002789  
PEFC™ no. ICILA-PEFCOC-000117  
ICEA no. LEED 2015\_001  
ICEA no. REC 2015\_001





## Sound absorption

Type of board <sup>1</sup>	Test specifications <sup>2</sup>			Certificate <sup>3</sup>		Sound absorption									
	Thickness [mm]	MW [mm]	TH [mm]	No.	Date	Frequencies $\alpha_p$ [Hz]					$\alpha_w$	NRC	SAA	Class	
						125	250	500	1000	2000					4000
<b>Application in adherence</b>															
CELENIT ABE	15		15	324526-A	14.05.2015	0.05	0.10	0.25	0.45	0.80	0.65	0.30 (H)	0.40	0.40	D
CELENIT ABE	25		25	331334-A	11.02.2016	0.10	0.20	0.35	0.70	0.85	0.85	0.40 (M-H)	0.55	0.53	D
CELENIT ABE	35		35	331335-A	11.02.2016	0.10	0.25	0.45	0.85	0.70	0.95	0.50 (M-H)	0.55	0.56	D
<b>Empty air gap</b>															
CELENIT ABE	15		45	324527-A	14.05.2015	0.10	0.15	0.45	0.80	0.55	0.60	0.45 (M-H)	0.50	0.49	D
CELENIT ABE	15		215	324527-B	14.05.2015	0.25	0.55	0.55	0.45	0.60	0.70	0.55 (H)	0.55	0.54	D
CELENIT ABE	15		300	324527-C	14.05.2015	0.30	0.55	0.45	0.55	0.60	0.75	0.55 (H)	0.55	0.54	D
CELENIT ABE	25		55	333106-A	20.04.2016	0.10	0.25	0.65	0.80	0.65	0.85	0.55 (M-H)	0.60	0.59	D
CELENIT ABE	25		75	331334-B	11.02.2016	0.15	0.35	0.80	0.75	0.70	0.95	0.65 (H)	0.65	0.64	C
CELENIT ABE	25		125	331334-C	11.02.2016	0.15	0.45	0.75	0.60	0.75	0.95	0.65 (H)	0.65	0.63	C
CELENIT ABE	25		225	331334-F	11.02.2016	0.25	0.65	0.65	0.60	0.80	1.00	0.65 (H)	0.65	0.66	C
CELENIT ABE	25		300	333106-B	20.04.2016	0.35	0.60	0.50	0.60	0.80	0.95	0.60 (H)	0.60	0.62	C
CELENIT ABE	35		65	331335-B	11.02.2016	0.15	0.30	0.75	0.85	0.75	0.95	0.60 (M-H)	0.65	0.67	C
CELENIT ABE	35		85	331335-C	11.02.2016	0.15	0.35	0.75	0.65	0.75	0.95	0.65 (H)	0.65	0.62	C
CELENIT ABE	35		235	331335-D	11.02.2016	0.30	0.70	0.60	0.70	0.90	1.00	0.70 (H)	0.70	0.72	C
CELENIT ABE	35		300	333107-A	20.04.2016	0.40	0.65	0.50	0.65	0.85	0.95	0.60 (L-H)	0.65	0.66	C
<b>Background filling with rock wool</b>															
CELENIT ABE	15	30 (2)	45	324526-B	14.05.2015	0.20	0.60	1.00	1.00	0.80	0.75	0.85	0.90	0.88	B
CELENIT ABE	15	40 (2)	300	324527-D	14.05.2015	0.50	0.85	0.95	1.00	0.85	0.80	0.90	0.90	0.91	A
CELENIT ABE	25	30 (4)	55	324528-B	14.05.2015	0.25	0.70	1.00	0.95	0.85	0.90	0.90	0.90	0.90	B
CELENIT ABE	25	30 (1)	85	324531-B	14.05.2015	0.35	0.85	1.00	0.95	0.85	0.90	0.95	0.95	0.94	A
CELENIT ABE	25	60 (1)	125	324533-A	14.05.2015	0.50	0.95	0.95	0.95	0.85	0.95	0.95	0.95	0.93	A
CELENIT ABE	25	30 (4)	200	324531-D	14.05.2015	0.50	0.85	0.95	1.00	0.90	0.90	0.95	0.95	0.93	A
CELENIT ABE	25	50 (2)	200	331334-E	11.02.2016	0.50	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.98	A
CELENIT ABE	25	60 (5)	200	331334-D	11.02.2016	0.35	1.00	0.90	0.85	0.85	1.00	0.90 (L)	0.90	0.89	A
CELENIT ABE	25	40 (3)	225	324533-B	14.05.2015	0.50	0.90	0.95	1.00	0.85	0.95	0.95	0.95	0.93	A
CELENIT ABE	25	50 (2)	300	324531-F	14.05.2015	0.55	0.90	1.00	1.00	0.85	0.95	0.95	0.95	0.94	A
CELENIT ABE	35	30 (2)	65	324534-B	14.05.2015	0.25	0.60	1.00	0.90	0.80	0.95	0.85	0.85	0.84	B
CELENIT ABE	35	40 (2)	200	324535-B	14.05.2015	0.50	0.95	1.00	1.00	0.90	1.00	1.00	0.95	0.94	A
CELENIT ABE	35	40 (2)	300	324535-D	14.05.2015	0.55	0.90	1.00	1.00	0.90	1.00	0.95	0.95	0.93	A

<sup>1</sup> Paint doesn't affect sound absorption performances of CELENIT boards as described in the technical note provided by Istituto Giordano dated 16.07.2015. Sound absorption values are also valid for products with grey cement

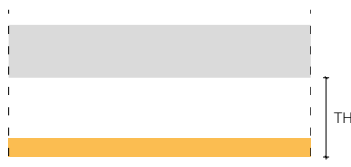
<sup>2</sup> Test specifications: "thickness" is relative to CELENIT board - "MW" is the thickness of rock wool in the background, (1) density 40 kg/m<sup>3</sup>; (2) density 50 kg/m<sup>3</sup>; (3) density 70 kg/m<sup>3</sup>; (4) density 80 kg/m<sup>3</sup>; (5) mineral wool with natural binder, density 18 kg/m<sup>3</sup> - "TH" is the total construction height from the lower edge of ceiling to lower edge of boards

<sup>3</sup> All certificate are based on tests carried out at the Giordano Institute (Bellaria - RN - Italy) according to EN ISO 354:2003 standard

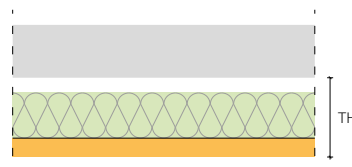
Application in adherence



Empty air gap





Background filling with rock wool





## Impact resistance tests according to EN 13964/Attached D - DIN 18032/Part 3

	Type of board	Structure	Certificate <sup>1</sup> No. / Date	Standard	Results
<b>Ceiling</b>					
	CELENIT ABE Thickness: 25 mm Dimensions: 1200x600 mm Edges: Chamfered - S4	Wooden battens size 60x30 mm Distance between centers of cross laths: 600 mm Distance between centers of main laths: 900 mm Number of screws per board: 9	332600 31.03.2016	EN 13964	Class 1A
				DIN 18032-3	Pass
<b>Wall</b>					
	CELENIT ABE Thickness: 35 mm Dimensions: 1200x600 mm Edges: Chamfered - S4	Wooden battens size 60x30 mm Distance between centers of cross laths: 600 mm Distance between centers of main laths: 600 mm Number of screws per board: 9	324042 27.04.2015	DIN 18032-3	Pass

<sup>1</sup> All certificate are based on tests carried out at the Giordano Institute (Bellaria - RN - Italy)

## Storage, use and maintenance

The boards must be stored on a pallet placed on a flat surface, protected from rain and direct sunlight. Pallets must be handled with care on site. Bumping the corners of the pallets can cause damage to the boards. For more information see the "Storage, use and maintenance" information available in the download area of the website [www.celenit.com](http://www.celenit.com).



CELENIT boards are dimensionally stable (EN 13168), however, they must be installed after acclimating to the same room they are going to be installed in, as well as after all concrete works are finished and the doors, windows, heating and ventilation systems have been installed. Room temperature must be kept constant before and after installation. Do not suddenly change the temperature of the room after installation.

The boards have one side that should be visible (front of the board) and another side that should be placed against the structure (back of the board). The back of the board usually has the CELENIT logo or shows calibration marks. The front may be painted and/or has worked edges. In the absence of paint or edges, the front can be identified according to the pallet layout: the front of the boards faces the top and the back faces the pallet.

Due to their natural production process and raw materials, boards that are not painted may have an uneven color. The boards must be painted to have an even color.