



# 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 - SC - SL - S4 - RD - FR - DT - T - RDT - RST - PS - PM

### Colours

standard acrylic water-based colours, liquid potassium silicate colours

### Applications

false ceilings, wall coverings, baffles, acoustic rafts and 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			
Dimensions [mm]	2400x600 - 2000x600 - 1200x600 - 600x600			
Thickness [mm]	15	25	35	
Weight [kg/m <sup>2</sup> ]	7.8	11.5	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
2400x600	boards per pallet	130	88	64
	m <sup>2</sup> per pallet	187.20	126.72	92.16
2000x600	boards per pallet	130	88	64
	m <sup>2</sup> per pallet	156.00	105.60	76.80
1200x600	boards per pallet	130	88	64
	m <sup>2</sup> per pallet	93.60	63.36	46.08
600x600	boards per pallet	260	176	128
	m <sup>2</sup> per pallet	93.60	63.36	46.08

## Certifications

CERTIQUALITY no. 1351 | rev. 10.04.2015

ANAB no. EDIL 2009\_004 Ed. 02 Rev. 00 | rev. 07.01.2015

NATUREPLUS no. 1007-1511-134-1 | rev. 12.11.2015

FSC® no. ICILA-COC-002789 | rev. 14.10.2014

PEFC™ no. ICILA-PEFCCOC-000117 | rev. 14.10.2014

ICEA no. LEED 2015\_001 Ed. 00 Rev. 00 | rev. 19.01.2015

ICEA no. REC 2015\_001 Ed. 00 Rev. 00 | rev. 19.01.2015

CPR EN 13168 no. 0407-CPR-755

CPR EN 13964 no. 0407-CPR-1165

UNI EN ISO 9001:2008





## 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

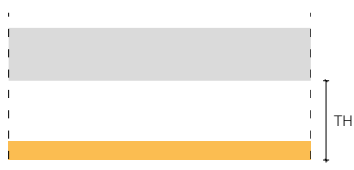
<sup>2</sup> Test specifications: "thickness" is relative to CELENIT board - "MW" is the thickness of rock wool in the background, (1) density 40 kg/m<sup>3</sup>; (2) density 50 kg/m<sup>3</sup>; (3) density 70 kg/m<sup>3</sup>; (4) density 80 kg/m<sup>3</sup>; (5) mineral wool with natural binder,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

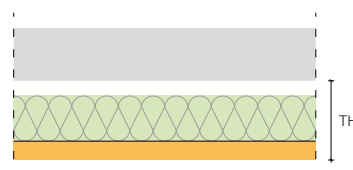
Application in adherence



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
Ceiling	 <p>CELENIT ABE Thickness: 25 mm Dimensions: 1200x600 mm Edges: Chamfered - S4</p>	<p>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</p>	332600 31.03.2016	EN 13964	Class 1A
				DIN 18032-3	Visual examination Pass
Wall	 <p>CELENIT ABE Thickness: 35 mm Dimensions: 1200x600 mm Edges: Chamfered - S4</p>	<p>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</p>	324042 27.04.2015	DIN 18032-3	Visual examination 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 in a flat surface, protected from rain and direct sun. Pallet handling on site will be performed with the necessary care. Bumps at the corners of the pallets can cause damage to the boards. For more information see the data "Storage, use and maintenance" 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 acclimatization in the same room where they are going to be installed. After all concrete works are finished and the doors, windows, heating and ventilation systems 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 CELENIT logo or shows marks of calibration. The front may be painted and/or has edges' works. In the absence of paint or edges it is possible to identify the front according to the pallet's layout: the front of the boards is towards the top and the back down towards the pallet.

Due to their natural production process and raw materials non painted boards may have a dis-homogeneous colour. The boards must be painted to have an homogeneous colour.