



# CELENIT AB

## Technical data sheet



Thermal and acoustic insulation board, consisting of mineralized thin fir wood wool bound with white Portland cement. Wood wool is 2 mm wide. High quality boards for design acoustic absorption systems. It complies with EN 13168 and EN 13964 standards.

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

Also available with grey Portland cement [CELENIT A].

### 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 AB	WW-EN13168-L3-W2-T2-S2-CS(10)200-CI3				
Designation code CELENIT A	WW-EN13168-L3-W2-T2-S2-CS(10)200-CI1				
Length x Width [mm]	2400x600 - 2000x600 - 1200x600 - 600x600				
Thickness [mm]	15	25	35	50	
Weight [kg/m²]	7.8	12.0	15.0	20.0	
Declared thermal conductivity $\lambda_0$ [W/mK]	0.070				
Declared thermal resistance $R_0$ [m²K/W]	0.20	0.35	0.50	0.70	
Compressive stress at 10% deformation $\sigma_{10}$ [kPa]	≥ 200			Sound absorption	$\alpha_w$ up to 0.95 - NRC up to 0.90
Water vapour transmission $\mu$	5			Durability	Class C
Specific heat $c_p$ [kJ/kgK] <sup>1</sup>	1.81			Light reflection CELENIT AB [%]	50.7 - 74.0 (painted white 05/15)
Reaction to fire <sup>2</sup>	Euroclass B-s1, d0			Light reflection CELENIT A [%]	31.2
Chloride content CELENIT AB [%]	≤ 0.06			Release of formaldehyde	Class E1
Chloride content CELENIT A [%]	≤ 0.35			Release of asbestos	it does not contain asbestos
<sup>1</sup> Certified by the University of Bologna - I.F.B.S.C. no. 809   rev. 07.05.2009					

<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	50 mm
boards: 2400x600	boards per pallet	130	88	60	44
pallet: 2400x1200	m² per pallet	187.20	126.72	86.40	63.36
boards: 2000x600	boards per pallet	130	88	60	44
pallet: 2000x1200	m² per pallet	156.00	105.60	72.00	52.80
boards: 1200x600	boards per pallet	130	88	60	44
pallet: 1200x1200	m² per pallet	93.60	63.36	43.20	31.68
boards: 600x600	boards per pallet	260	176	120	
pallet: 1200x1200	m² 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-PEFCCOC-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
Application in adherence															
CELENIT AB	15		15	324212-A	30.04.2015	0.05	0.10	0.20	0.35	0.75	0.60	0.30 (H)	0.35	0.35	D
CELENIT AB	25		25	331332-A	11.02.2016	0.10	0.20	0.40	0.85	0.80	0.85	0.45 (M-H)	0.55	0.56	D
CELENIT AB	35		35	333105-A	20.04.2016	0.15	0.25	0.50	0.95	0.70	0.85	0.50 (M-H)	0.60	0.60	D
CELENIT AB	50		50	324219-A	30.04.2015	0.15	0.30	0.65	0.95	0.70	0.85	0.60 (M-H)	0.65	0.64	C
Empty air gap															
CELENIT AB	15		45	324213-A	30.04.2015	0.10	0.15	0.40	0.75	0.45	0.55	0.40 (M-H)	0.45	0.43	D
CELENIT AB	15		115	324213-B	30.04.2015	0.15	0.40	0.65	0.45	0.45	0.70	0.50 (H)	0.50	0.48	D
CELENIT AB	15		215	324213-E	30.04.2015	0.25	0.55	0.50	0.40	0.50	0.70	0.50 (L-H)	0.50	0.49	D
CELENIT AB	25		55	333104-A	20.04.2016	0.10	0.15	0.45	0.65	0.50	0.65	0.45 (H)	0.45	0.44	D
CELENIT AB	25		125	331332-B	11.02.2016	0.25	0.75	0.65	0.50	0.85	0.90	0.60 (L-H)	0.70	0.70	C
CELENIT AB	25		200	331332-C	11.02.2016	0.35	0.75	0.55	0.55	0.80	0.90	0.60 (L-H)	0.65	0.67	C
CELENIT AB	25		225	331332-D	11.02.2016	0.25	0.65	0.60	0.65	0.85	1.00	0.65 (H)	0.70	0.69	C
CELENIT AB	25		425	331332-E	11.02.2016	0.45	0.55	0.50	0.65	0.80	1.00	0.60 (H)	0.60	0.62	C
CELENIT AB	35		135	333105-B	20.04.2016	0.20	0.60	0.70	0.50	0.80	0.80	0.60 (H)	0.65	0.64	C
CELENIT AB	35		300	324217-D	30.04.2015	0.40	0.55	0.45	0.55	0.80	0.80	0.55 (H)	0.60	0.59	D
CELENIT AB	35		435	333105-C	20.04.2016	0.45	0.55	0.50	0.65	0.85	0.90	0.60 (H)	0.65	0.64	C
Background filling with rock wool															
CELENIT AB	15	30 (1)	45	324212-B	30.04.2015	0.20	0.50	1.00	0.95	0.65	0.75	0.70 (M)	0.80	0.77	C
CELENIT AB	15	30 (1)	115	324213-C	30.04.2015	0.30	0.80	1.00	0.90	0.75	0.75	0.85	0.85	0.86	B
CELENIT AB	15	50 (2)	200	324213-D	30.04.2015	0.45	0.90	0.95	0.95	0.75	0.75	0.85 (L)	0.90	0.89	B
CELENIT AB	15	40 (1)	290	324213-F	30.04.2015	0.50	0.90	0.95	0.95	0.75	0.80	0.85 (L)	0.90	0.88	B
CELENIT AB	25	30 (4)	55	324214-B	30.04.2015	0.20	0.55	1.00	0.90	0.70	0.90	0.75 (M-H)	0.80	0.79	C
CELENIT AB	25	30 (1)	85	324215-B	30.04.2015	0.25	0.70	1.00	0.80	0.75	0.90	0.80	0.80	0.82	B
CELENIT AB	25	60 (1)	125	324215-D	30.04.2015	0.40	0.90	0.95	0.90	0.80	0.90	0.90	0.90	0.88	B
CELENIT AB	25	30 (4)	200	324215-E	30.04.2015	0.40	0.90	0.95	0.90	0.80	0.90	0.90	0.90	0.88	A
CELENIT AB	25	50 (3)	300	324215-F	30.04.2015	0.50	0.90	0.95	0.95	0.85	0.95	0.95	0.90	0.91	A
CELENIT AB	35	30 (4)	65	324216-B	30.04.2015	0.30	0.75	1.00	0.85	0.85	0.95	0.90	0.90	0.89	A
CELENIT AB	35	60 (1)	135	324217-B	30.04.2015	0.50	1.00	0.95	0.85	0.85	0.95	0.90 (L)	0.90	0.92	A
CELENIT AB	35	40 (4)	200	324217-C	30.04.2015	0.50	0.90	0.95	0.95	0.85	0.95	0.95	0.90	0.92	A
CELENIT AB	35	40 (1)	320	324217-E	30.04.2015	0.55	0.90	0.95	0.95	0.90	1.00	0.95	0.90	0.92	A

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

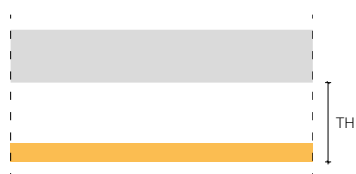
<sup>2</sup> Test specifications: "thickness" is relative to CELENIT board - "MW" is the thickness of rock wool in the background, (1) density 40 kg/m<sup>3</sup>; (2) density 50 kg/m<sup>3</sup>; (3) density 70 kg/m<sup>3</sup>; (4) density 80 kg/m<sup>3</sup> - "TH" is the total construction height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

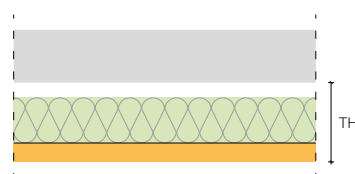
Application in adherence



Empty air gap



Background filling with rock wool





## Sound absorption

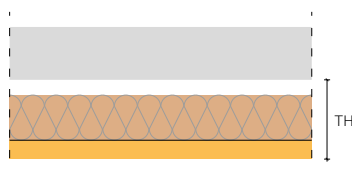
Type of board <sup>1</sup>	Test specifications <sup>2</sup>			Certificate <sup>3</sup>		Sound absorption									
	Thickness [mm]	MW [mm]	TH [mm]	No.	Date	Frequencies $\alpha_p$ [Hz]						$\alpha_w$	NRC	SAA	Class
						125	250	500	1000	2000	4000				
Background filling with wood fibre CELENIT FL/45															
CELENIT AB	25	40 (2)	65	333104-B	20.04.2016	0.25	0.60	1.00	0.85	0.75	0.95	0.80 (H)	0.80	0.81	B
CELENIT AB	25	60 (2)	200	333104-C	20.04.2016	0.40	0.90	0.85	0.85	0.80	0.95	0.85 (L)	0.85	0.86	B
CELENIT AB	25	40 (2)	300	333104-D	20.04.2016	0.50	0.90	0.85	0.90	0.85	1.00	0.90	0.85	0.87	A

<sup>1</sup> Paint doesn't affect sound absorption performances of CELENIT boards as described in the technical note provided by Giordano Institute 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 - "WF" is the thickness of wood fiber CELENIT FL/45 in the background, (2) density 50 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

Background filling with wood fibre CELENIT FL/45





## 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					
	CELENIT AB Thickness: 25 mm Dimensions: 1200x600 mm Edges: Chamfered - S4	C metal section 27x60x27 mm Distance between centers of cross joists: 600 mm Distance between centers of main joists: 900 mm Number of screws per board: 9	332601 31.03.2016	EN 13964	Class 1A
	CELENIT AB Thickness: 35 mm Dimensions: 1200x600 mm Edges: Chamfered - S4	C metal section 27x60x27 mm Distance between centers of cross joists: 600 mm Distance between centers of main joists: 900 mm Number of screws per board: 9	332602 31.03.2016	DIN 18032-3	Pass
	CELENIT AB Thickness: 25 mm Dimensions: 1200x600 mm Edges: Straight - DT	T metal profile 24x38 mm Distance between centers of cross joists: 1200 mm Distance between centers of main joists: 600 mm Anti-lift pin: 2 per board	200535 22.08.2005	EN 13964	Class 1A
Wall					
	CELENIT AB Thickness: 25 mm Dimensions: 1200x600 mm Edges: Chamfered - S4	C metal section 27x60x27 mm Distance between centers of cross joists: 300 mm Distance between centers of main joists: 600 mm Number of screws per board: 9	324044 27.04.2015	DIN 18032-3	Pass
	CELENIT AB Thickness: 35 mm Dimensions: 1200x600 mm Edges: Chamfered - S4	C metal section 27x60x27 mm Distance between centers of cross joists: 600 mm Distance between centers of main joists: 600 mm Number of screws per board: 9	324043 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)



## Load resistance of accidentally detached ceiling material

	Type of board	Structure	Certificate <sup>1</sup> No. / Date	Results
	CELENIT AB Thickness: 25 mm Dimensions: 1200x600 mm Edges: Chamfered - S4	C metal section 27x50x27 mm Distance between centers of cross joists: 400 mm Distance between centers of main joists: 800 mm Distance between centers of screws: 300 mm <b>Empty air gap up to 400 mm</b>	324031 24.04.2015	No significant deformation, cracks or other damages of suspension structure and the false ceiling
	CELENIT AB Thickness: 25 mm Dimensions: 595x595 mm Edges: Straight - DT	T metal profile 24x38 mm Distance between centers of cross joists: 600 mm Distance between centers of main joists: 600 mm Distance between centers of screws: 800 mm <b>Empty air gap up to 200 mm</b>	332243 17.03.2016	

<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.