

about us

Skanda Acoustics Limited are the UK & Irelands leading supplier of wood wool boards and acoustic panels for the building industry. Our specialist knowledge has been gained by working in association with the leading manufacturers across Europe with over 80 years manufacturing experience in wood wool products.

SKANDA

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savolit plus
wood wool building boards

celenit L3
external wall insulation

celenit acoustic/design
natural ceiling & wall panels

SKANDA

natural building boards
for sustainable construction

environmental vision and policy

At Skanda we believe the future quality of human life is dependent on both economic vitality and a healthy, sustainable natural environment.

We do not see these goals as mutually exclusive, but inextricably linked. Mankind's future depends on meeting the needs and aspirations of a growing global population, while enhancing and protecting the ecosystem on which all life depends.

Environmental product statement

- Savolit Plus wood wool boards are genuine natural products.
- The main component is spruce wood obtained from sustainable managed forests. The wood fibres are mineralized and bonded into panels with Portland cement.
- There are no VOC's (Volatile Organic Compound), heavy metals, asbestos, formaldehyde and other harmful substances or allergens.
- Savolit Plus boards in their lifecycle from production, installation, lifespan and decomposition (recycling), do not pose a risk to the environment. Waste can be disposed of at landfills for general construction materials.
- The production process strives to minimise the burden on the environment during the production process. Woodmass waste is used as a renewable source of thermal energy.
- Savolit Plus wood wool boards are 100% recyclable.
- Savolit Plus boards are PEFC certified and are also available with FSC® certification. Please contact us for details regarding our FSC® certified products.



The mark of responsible forestry
FSC® C018884



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natural ceiling & wall panels

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technical data

savolit plus wood wool boards

Savolit Plus is the result of continuous research and the desire to provide the best environmentally friendly products and solutions. Savolit Plus wood wool boards are genuine natural panels and consist of long, strong wood fibres which are mineralised and bonded into panels.

The raw timber originates from sustainably managed forests and is PEFC labelled. From production, installation, lifespan and decomposition (recycling) Savolit Plus panels do not pose a risk to the environment. Savolit Plus wood wool boards are 100% recyclable.

Why choose Savolit Plus:

Savolit Plus multi purpose wood wool building boards have all the advantages of standard boards with the additional benefits:

- High resistance to moisture and frost
- High flexural strength
- High compressive strength
- Low environmental impact
- PEFC certified timber from sustainably managed forests
- Wide range of panel sizes and thickness



applications

- External cladding of timber frame walls
- Internal lining of timber frame walls
- Base Board for plastered ceilings and walls
- Internal partition walls
- Carrier board for render

composition

Savolit Plus wood wool boards consist of long strong wood fibres, stabilised by chemical impregnation and bound by cement-binding agent into a compact coherent structure.

The mineralisation process strongly increases the fire resistance of wood wool. The composition and performance of the boards make them ideal for many different applications in building constructions.

As a result of Plus panels composition, tests have shown that they are unaffected by moisture and frost.

Produced in accordance to standard EN 13168 and are CE marked.

Savolit Plus timber comes from forests certified PEFC that are sustainably managed.

ecological and health aspects

- Many sustainable benefits
- Boards are made of natural materials
- No waste disposal problem
- Ideal for buildings comfortable for people sensitive to allergies
- Recommended for healthy living environments
- No harmful gases or vapours given off
- No toxic fumes if burned
- Diffusion permeable
- Hygroscopic - levels out humidity level changes
- Naturally resistant to fungus and insects

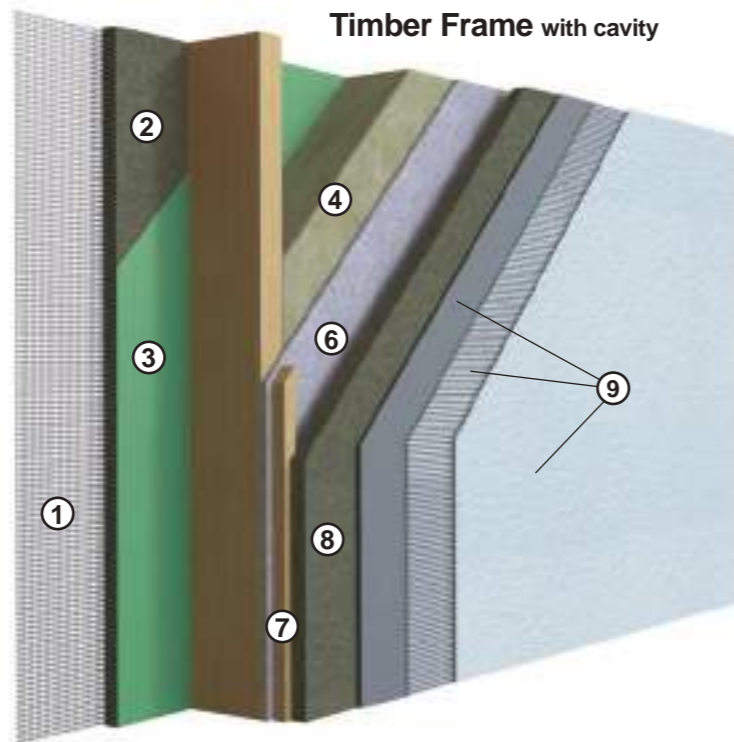
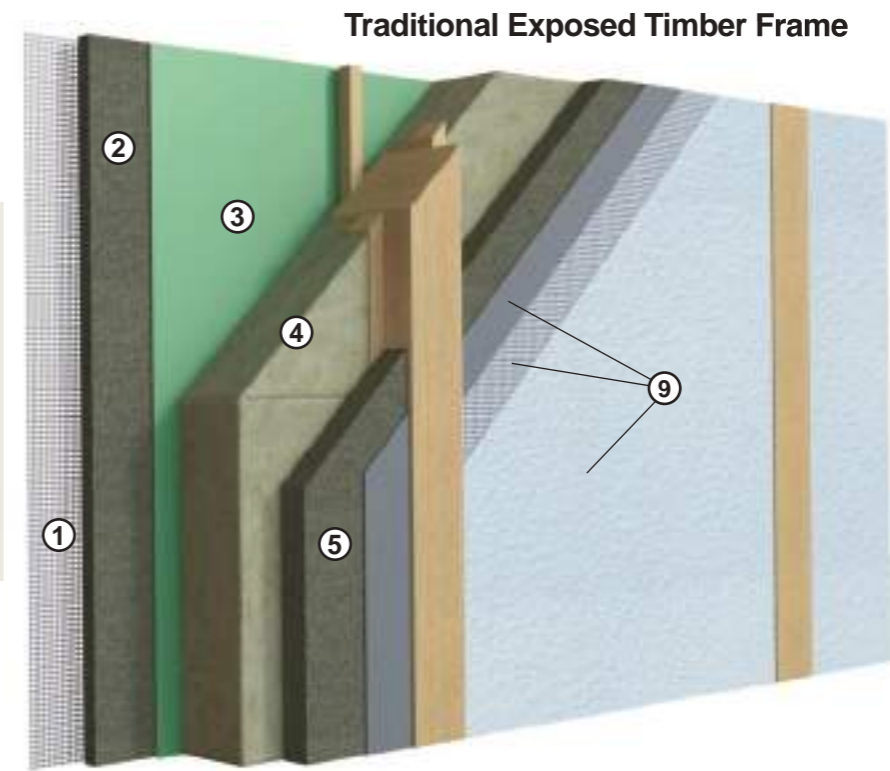
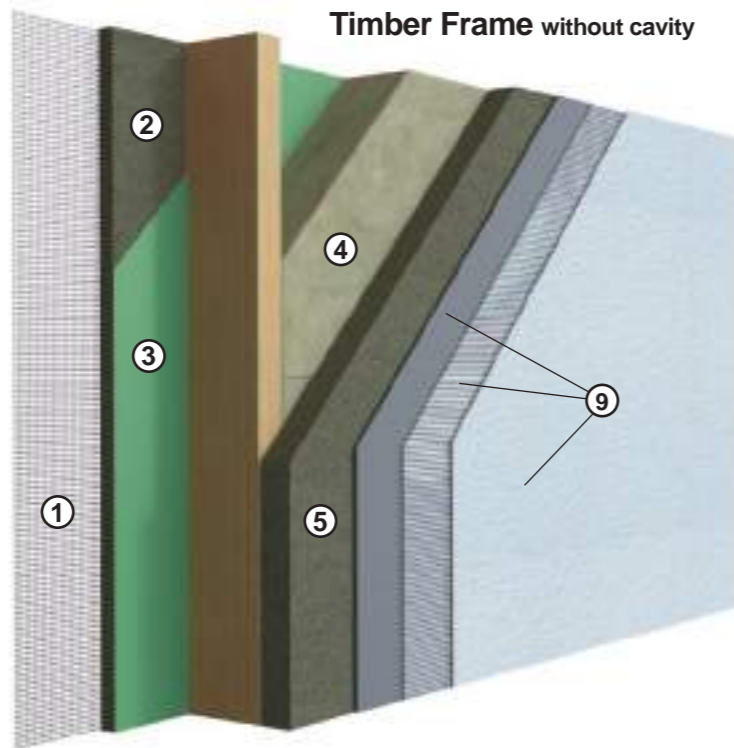
technical advantages

- Unaffected by humidity and frost
- Durable
- Non flammable and self extinguishing
- Thermally insulating
- Compatible with all normal construction materials
- High compression resistance and flexural strength
- Stable
- Surface offers good mechanical key for renders and plasters
- Sound absorbing and noise insulating
- Vapour permeable
- Easy and safe to handle, cut and work
- Proven performance in over 80 years in all climates
- Available in wide range of board sizes
- Low environmental impact
- PEFC certified





frame wall and ceiling constructions



Number Key:

- | | |
|---|--|
| 1. Interior plaster glass fibre mesh | 5. SAVOLIT Plus board 50 mm |
| 2. SAVOLIT Plus board 25 or 35 mm or Plasterboard (alternative) | 6. Sheathing board |
| 3. Vapour check | 7. Battens (vent cavity) |
| 4. Frame construction and insulation | 8. SAVOLIT Plus board 25 or 35 mm |
| | 9. Exterior render with glass fibre mesh |



installation

Mechanically fixed with screws and savolit washers

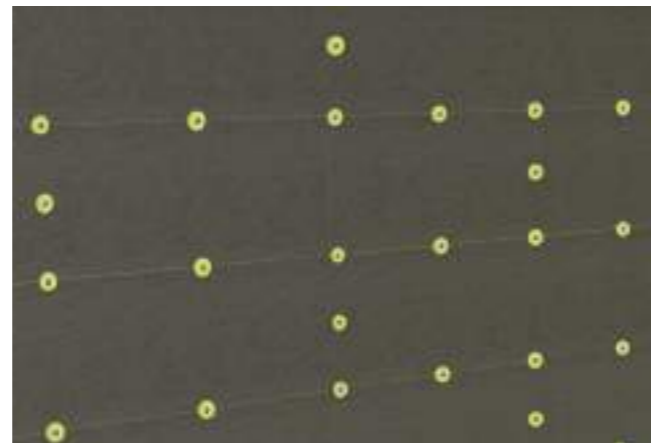
Board		screw (length, diameter)
15mm	-	min. 45mm, Ø4.8
25mm	-	min. 50mm, Ø4.8
35mm	-	min. 70mm, Ø5
50mm	-	min. 90mm, Ø5

Minimum Fixings per m2

25mm board - 15 min. Screws / m2
35mm board - 12 min. Screws / m2
50mm board - 9 min. Screws / m2

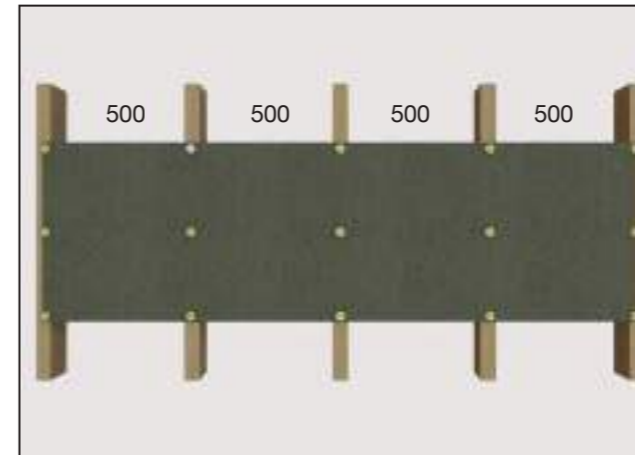
Savolit Plus boards may also be fixed without centre fixing with the following minimum fixings per board:

	2000 x 600mm	1200 x 600mm
25mm board - 14 screws /board	10 screws/board	
35mm board - 14 screws /board	8 screws/board	
50mm board - 10 screws /board	6 screws/board	



SAVOLIT Plus wood wool boards are installed in broken bond pattern and fastened to timber structures with timber screws and Savolit washers:

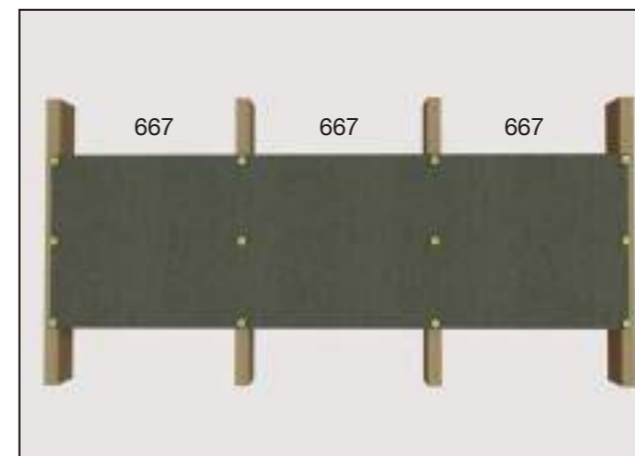
Savolit Plus 25mm



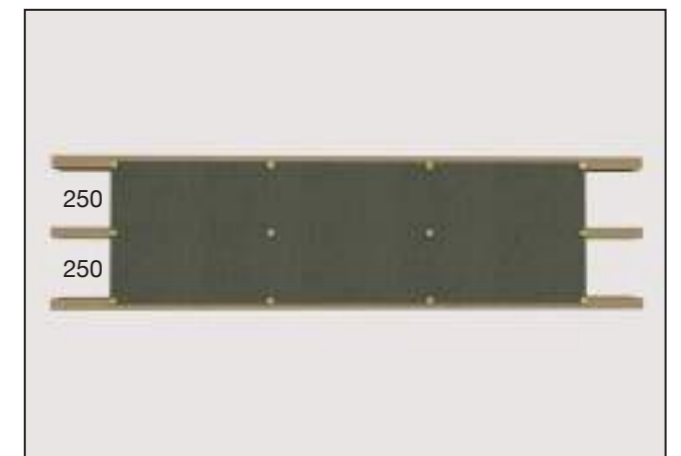
Savolit Plus 25mm



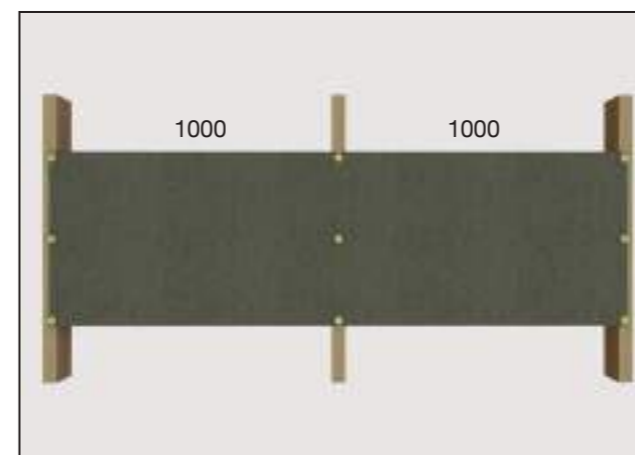
Savolit Plus 35mm



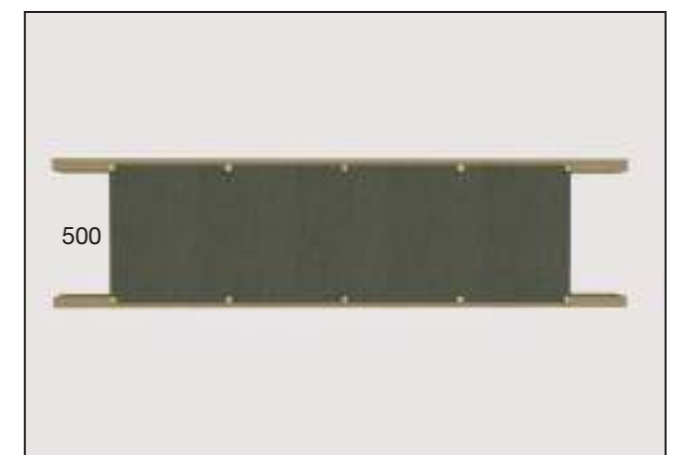
Savolit Plus 35mm



Savolit Plus 50mm



Savolit Plus 50mm



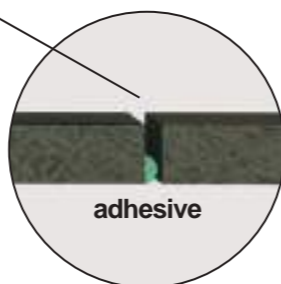


edge bonding

If boards are fully edge bonded one to another it is not then necessary for board ends to occur at supports and allowing increased spans as follows:

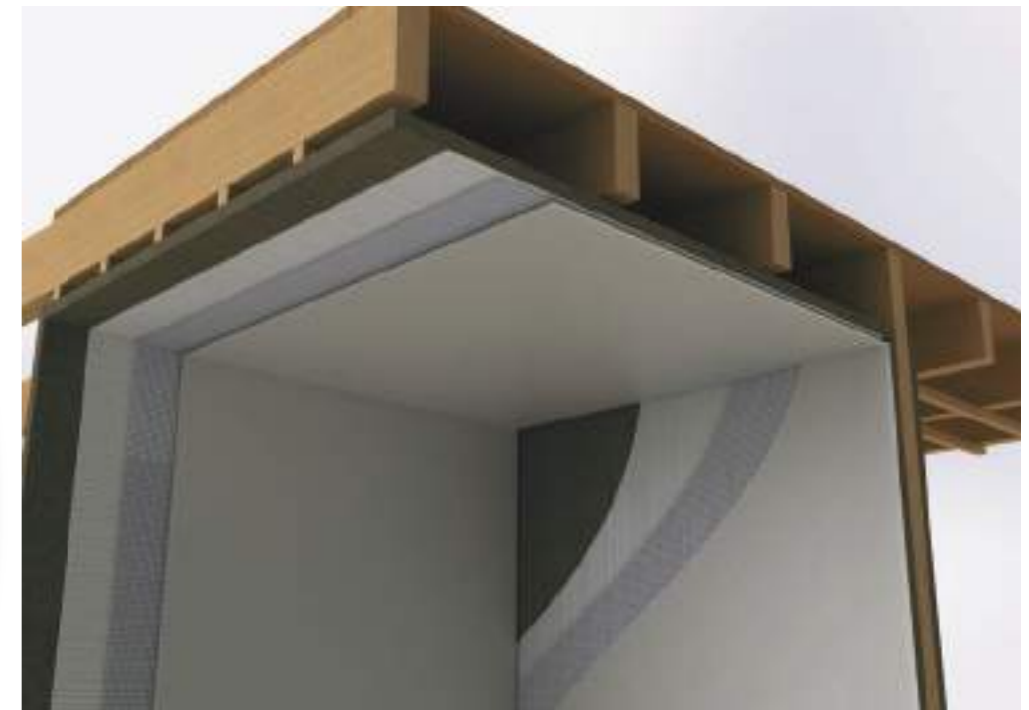
Board thickness 25mm	Board thickness 35, 50mm
Maximum span 666mm	Maximum span 1000 mm

SAVOLIT Plus boards 25, 35 and 50mm thick are fully edge bonded with a bead of Savolit P010 adhesive.

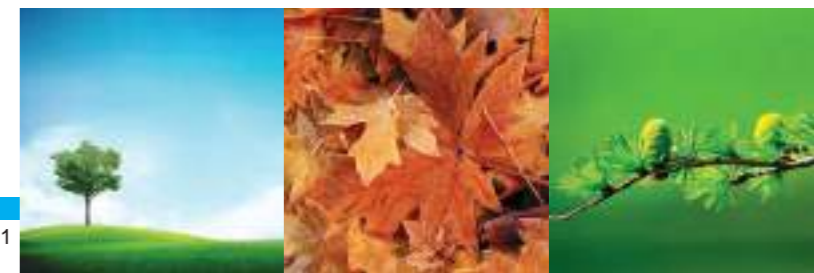


frame wall and ceiling constructions

Interior wall and ceiling applications



SAVOLIT Plus 25 mm either direct fixed to joists (studs) or via supporting battens. Lime or plaster with glass fibre mesh.



Celenit L3

Celenit L3 external wall insulation

The purpose designed, **Celenit L3** laminated insulation board forms the heart of an external wall insulation system that is simple to install. The boards, trims and sections are easy to cut and fasten and the application of render only requires the skill of a competent plasterer.

Originally designed for the external insulation of solid masonry walls **Celenit L3** insulation boards can span up to 1000mm and so may also be applied to timber or steel frame walls.

Traditional lime renders and other render products may be applied on **Celenit L3** boards but approval should be sought prior to application.

Board Sizes

The Celenit L3 insulation board consists of non combustible rockwool core sandwiched between two layers of wood cement composite. It is available in the following sizes:

2000 x 600 x 50mm	1000 x 600 x 50mm
2000 x 600 x 75mm	1000 x 600 x 75mm
2000 x 600 x 100mm	1000 x 600 x 100mm
2000 x 600 x 125mm	1000 x 600 x 125mm
2000 x 600 x 150mm	1000 x 600 x 150mm
2000 x 600 x 175mm	1000 x 600 x 175mm

Celenit L3 have a reaction to fire rating Bs1d0 but are also available in Euroclass A2.



Celenit L3 advantages

- Resistant to impact and compression damage
- Tough, rigid, easily cut and fix insulation boards
- Secure mechanical fastening
- Can install over existing rendered walls
- Insulation boards can span over irregularities
- “Breathing” system allowing moisture diffusion
- Sound insulation and fire resistant
- Good render bonding board surface
- Well-proven, through-colour render system available
- User friendly system available direct for building contractors
- Full technical support and site instruction available

energy conservation and environmental protection through effective thermal insulation

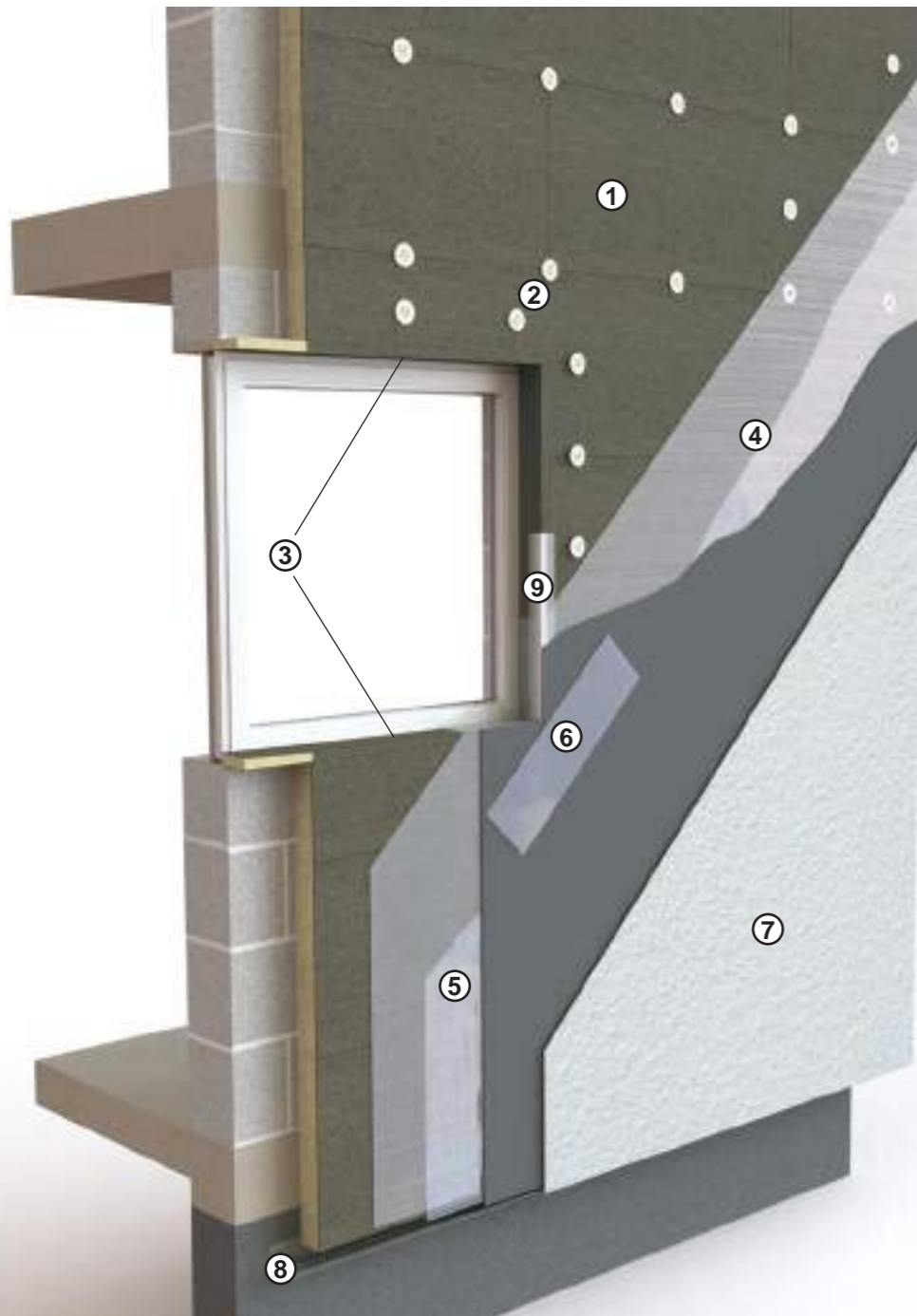
Wall Construction

U-Value

Solid 220mm (9”) brick wall	2.08 W/m2K
+ 50mm Celenit L3 and render	0.59 W/m2K
+ 75mm Celenit L3 and render	0.43 W/m2K
+ 100mm Celenit L3 and render	0.33 W/m2K
+ 125mm Celenit L3 and render	0.28 W/m2K



celenit L3 external wall insulation system



1. Celenit L3
2. Dowel fixings
3. Window reveal insulation
4. Render base coat
5. Render reinforcement scrim
6. Reinforcement scrim bandage
7. Render top coat
8. Base/eave drip trim
9. Corner bead trim

External wall insulation

- Converts external walls from heat radiators to heat stores
- Reduces heating costs
- Provides stable and constant interior temperatures
- Eliminates water penetration
- Eliminates condensation on interior walls
- Improves building appearance
- Extends the life of buildings

Dowel layout at base wall



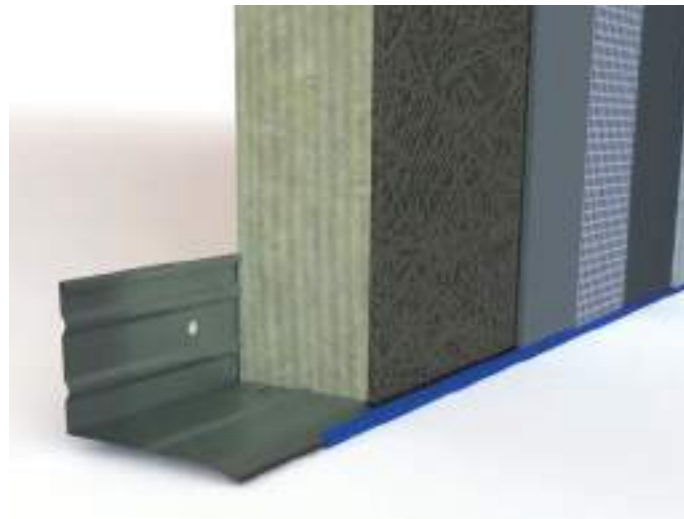
External wall corner



Wall opening (window)



installation guide



Base Profile

Base / eave drip sections are aligned horizontally and fixed with suitably plated screws and plugs to the wall. The minimum distance from the edge of the base profile to the ground surface should not be less than 200mm and the base profile should not be positioned below any damp course. The base profile section seals off the bottom edges of the **Celenit L3** board and also forms a render drip edge.

Celenit L3 Insulation Boards

The first course of **Celenit L3** boards is placed on the base profile and each board is initially fixed in the centre with a dowel. The boards are placed horizontally, in broken bond, butted tightly together and fixed with dowels at the board butt joints. Board end joints are alternated at building corners. Any narrow cut board pieces should additionally be fixed with **P010 Adhesive**. Prior to installation **Celenit L3** boards should be stored dry and flat. Boards are cut with hand or circular saw. Small pieces are best cut with the board laid flat and both pieces installed immediately to minimise wastage.

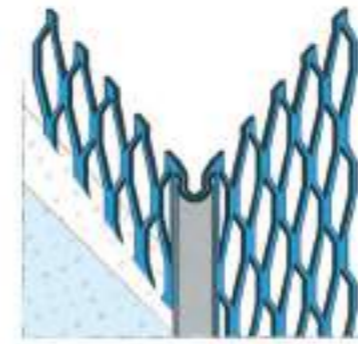


Dowels

Dowels are placed at board joints at maximum 600mm centres. Extra dowels are used at corners, along the base profile and around openings (see diagrams). The number and length of dowels will depend upon the type of masonry, building height, wind loadings and render weight. It is the responsibility of the installer to ensure the correct number and length of dowels are used and, if necessary, to carry out drilling and dowel pull-out tests.



Dowels Required	m ²
Minimum	6 no./ m ²
Average	8 no./ m ²



Corner Bead

Corner beads ensure the render is true and are cemented to the **Celenit L3** board surface with **P010 Adhesive** at external corners of walls, doors and window reveals and aligned and positioned to suit the render thickness. The glass fibre render reinforcement mesh is taken up tight to the corner trim.



Expansion Joint / Movement Joint Bead

Large uninterrupted areas of render should be divided at intervals of approximately 5 metres with movement/ expansion joint beads and these also should be installed at connections to existing structures and structural expansion joints. Where expansion/movement joint beads are fitted the **Celenit L3** boards should be cut through to the substructure. Expansion/movement joint beads are cemented to the Celenit L3 board surface using **P010 Adhesive**.



Reveals

Reveal insulation pieces are cut from **Celenit L3** or Savolit board and stuck around door and window reveals with **P010 Adhesive** and additionally fixed with dowels at 500mm centres. Reveal pieces prevent heat transfer and so with old buildings it is important to remove any existing render to gain space for the thermal insulation. At the window jamb the render must be cut with the trowel edge and the joint filled with suitable flexible filler.



Render Reinforcement Mesh

It is recommended that render reinforcement mesh is incorporated within renders applied to **Celenit L3** and Savolit boards to absorb stresses. The mesh edges must be overlapped at least 100mm (coverage approx. 1.2m² for each square metre of wall surface). In addition, strips of mesh 600 x 200mm, should be placed diagonally as reinforcement to absorb stresses at corners of doors and windows.

celenit acoustic /design

celenit acoustic /design

natural ceiling and wall panels



CELENIT ACOUSTIC/DESIGN provides a range of advanced solutions that combine high sound absorption performance with the sustainability and eco-compatibility of a natural product, which is both aesthetically attractive, versatile and easy to use.

The material has a natural resilience and can handle moist environments, while also providing effective fire resistance. Celenit acoustic panels have a reaction to fire rating Bs1d0 but are also available in Euroclass A2. Celenit Acoustic/Design is a natural product with documented sustainability throughout its entire life cycle.

Celenit panels are PEFC certified and are also available with FSC® certification. Please contact us for details regarding our FSC® certified products.



what is celenit



Mineralised fir wood wool, bound with Portland cement. CELENIT boards are made of **wood wool** and mineral binders, mainly **Portland cement**.

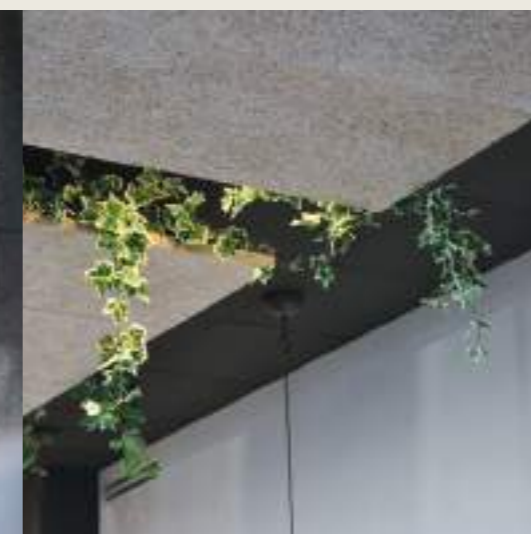


Fibres are mineralised: the process stops the biological deterioration, making the fibres totally inert. In addition to retaining wood's mechanical properties, it increases the level of resistance. Fibres are coated with Portland cement and bound together under pressure to form a **steady, resistant, compact** and **durable structure**.



The characteristics of CELENIT panels, such as mass, porous structure, low elastic modulus and internal absorption effect, make them very suitable to reduce background noise (**sound absorption**) and to shield sound transmissions (**sound insulation**).

CELENIT ACOUSTIC I DESIGN provides a range of advanced solutions that combine high **sound absorption** performance with the **sustainability** and eco-compatibility of a natural product, which is both aesthetically attractive and mechanically **resistant**.



textures

CELENIT ACOUSTIC/DESIGN products are available in three textures, which differ in the width of the wood wool.



1mm - extra fine



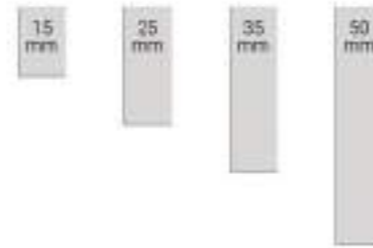
2mm - fine



3mm - standard

thickness

Wood wool boards are available in 4 thicknesses (15, 25, 35, 50 mm).



installation

CELENIT ACOUSTIC range

• thickness 15 mm



600x600 mm - 9 screws
Orthogonal installation:
Spacing of fixings 300 mm
Wood laths fixed every 300 mm



1200x600 mm - 12 screws
Orthogonal installation:
Spacing of fixings 300 mm
Wood laths fixed every 400 mm

• thicknesses 25/35 mm



600x600 mm - 4 screws
Orthogonal/parallel installation:
Spacing of fixings 600 mm
Wood laths fixed every 600 mm



2000x600 mm - 10 screws
Parallel installation:
Spacing of fixings 500 mm
Wood laths fixed every 600 mm
Orthogonal installation:
Spacing of fixings 600 mm
Wood laths fixed every 500 mm



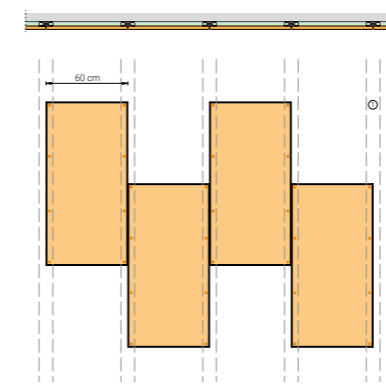
1200x600 mm - 6 screws
Parallel installation:
Spacing of fixings 600 mm
Wood laths fixed every 600 mm
Orthogonal installation:
Spacing of fixings 600 mm
Wood laths fixed every 600 mm



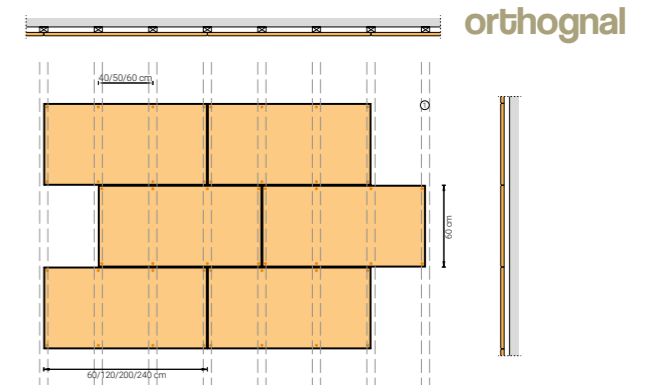
2400x600 mm - 10 screws
Orthogonal/parallel installation:
Spacing of fixings 600 mm
Wood laths fixed every 600 mm

Board thickness [mm]	Dimensions [mm]	Screws per board [No.]	Screws per m ² [No./m ²]	Screw dimensions [mm]
15	600x600	9	25.0	4.65x35
	1200x600	12	16.7	
25	600x600	4	11.2	4.65x45
	1200x600	6	8.4	
	2000x600	10	8.4	
	2400x600	10	7.0	
35	600x600	4	11.2	4.65x60
	1200x600	6	8.4	
	2000x600	10	8.4	
	2400x600	10	7.0	

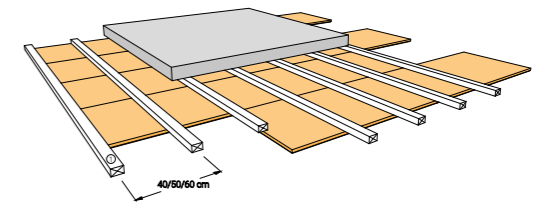
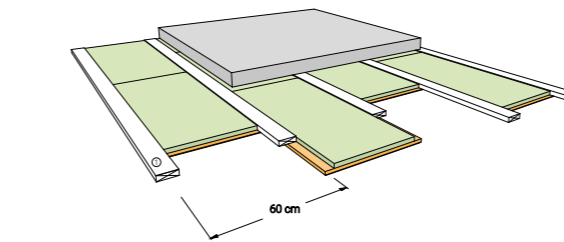
wooden battens - ceiling



parallel

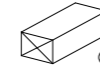


orthogonal



Wood laths
Wood lath dimensions:
• with CELENIT ACOUSTIC panels: the recommended sections (BxH) are 60x40 mm or 80x40 mm
• with CELENIT ACOUSTIC MINERAL panels: width max. 95 mm, height min. 30 mm

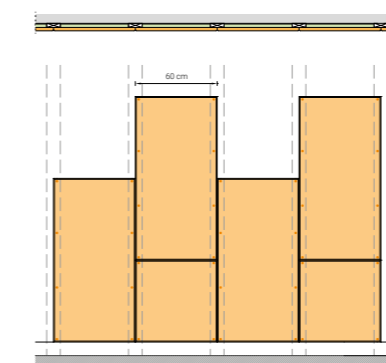
Self-tapping screw for wood
White zinc-plated
Countersunk head with cross, fully threaded, professional lubricant covering
Dimensions 4.65x35 - 4.65x45 - 4.65x60



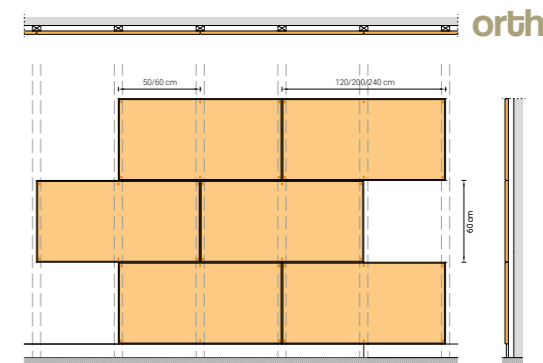
Wood laths
Recommended sections (BxH): 60x40 mm or 80x40 mm

Self-tapping screw for wood
White zinc-plated
Countersunk head with cross, fully threaded, professional lubricant covering
Dimensions 4.65x35 - 4.65x45 - 4.65x60

wooden battens - walls



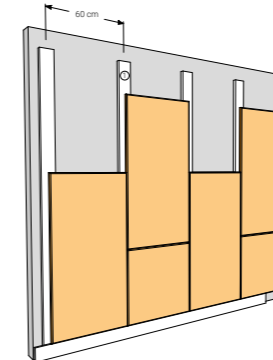
parallel



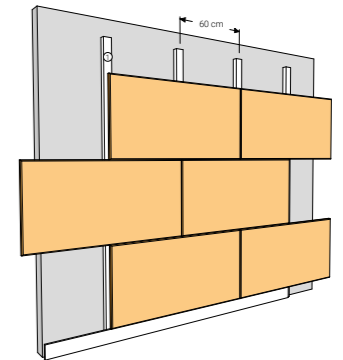
orthogonal



Wood laths
Wood lath dimensions:
• with CELENIT ACOUSTIC panels: the recommended sections (BxH) are 60x40 mm or 80x40 mm
• with CELENIT ACOUSTIC MINERAL panels: width max. 95 mm, height min. 30 mm



Wood laths
Recommended sections (BxH): 60x40 mm or 80x40 mm



technical data

savolit plus

Technical Characteristics	Designation	Units	Data					Standard
Board thickness	d	(mm)	15	25	35	50	75	
Board length	l	(mm)	2400 2000 1200	2400 2000 1200	2400 2000	2400 2000	2000	
Board width	b	(mm)	600					
Average Specific Mass		(Kg/m ²)	8	11.5	14	19	26	EN 1602
Declared thermal resistance	RD	(m ² K/W)	0,20	0,35	0,50	0,75	1,15	EN 12667
Declared thermal conductivity	λD	(W/mK)	0.065					EN 12667
Bending strength	σb	(kPa)	1700	1300	1000	700	600	EN 12089, A
Compressive strength at 10% deformation	σ10	(kPa)	≥ 200			≥ 150	≥ 150	EN 826
Water vapour diffusion resistance factor	μ	(-)	5					EN 12086
Fire reaction			Euroclass B - s1, d0					EN 13501-1
Thickness tolerance		(mm)	+3, -2					EN 823
Width tolerance		(mm)	± 3					EN 822
Length tolerance		(mm)	± 3.5					EN 822
Squareness		(mm/m)	≥ 2					EN 824
Specific heat		kJ/kgK	1,81					
Capacity for thermal accumulation		kJm ³ K	965-628					
Capacity for absorption of room humidity		l/m ²	2 - 3,5					
Resistance to water and frost			No alteration and maintenance of bending resistance after 20 cycles of frosting and defrosting in water					



Skanda Acoustics Limited reserves the right to amend product specifications without prior notice. The information, fixing instructions and technical data included in this literature are provided in good faith and apply to uses described. Recommendations for use of all products should be verified for suitability and compliance with actual requirements from the product manufacturers. For other applications or conditions of use please contact Skanda Acoustics Limited.

celenit L3

Technical Characteristics	Data						
Standard	EN 13168						
Length x Width (mm)	2000 x 600 - 1000 x 600						
Thickness (mm)	35	50	75	100	125	150	175
Layers structure (mm)	5/25/5	5/40/5	5/65/5	5/90/5	5/115/5	5/140/5	5/165/5
Weight (kg/m ²)	10.8	12.3	15.4	18.7	22.1	25.5	28.8
Declared thermal conductivity λD (W/mK)	WW 0.071 - MW 0.039						
Declared thermal resistance RD (m ² K/W)	0.75	1.15	1.80	2.45	3.05	3.70	4.35
Thermal resistance R (m ² K/W)	0.78	1.17	1.81	2.45	3.09	3.73	4.37
Compressive strength σm (kPa)	≥ 50						
Tensile strength perpendicular to faces σm (kPa)	≥ 15						
Water vapour transmission μ	WW 5 - MW 1						
Reaction to fire	Euroclass B-s1, d0 or A2						
Chloride content (%)	≤ 0.35						

celenit acoustic/design



Technical Data	
Standard	EN 13168 - EN 13964
Length x Width (mm)	2400 x 600 - 2000 x 600 - 1200 x 600 - 600 x 600
Thickness (mm)	15 25 35
Weight (kg/m ²)	7.8 12.0 15.0
Declared thermal conductivity λD (W/mK)	0.075
Declared thermal resistance RD (m ² K/W)	0.20 0.30 0.45
Compressive stress at 10% deformation σ10 (kPa)	≥ 300
Water vapour transmission μ	5
Specific heat cP (kJ/kgK)	1.81
Reaction to fire (The reaction to fire does not change for painted products)	Euroclass B-s1, d0 or A2
Sound absorption	αw 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
Chloride content CELENIT ABE (%)	≤ 0.06
Chloride content CELENIT AE (%)	≤ 0.35