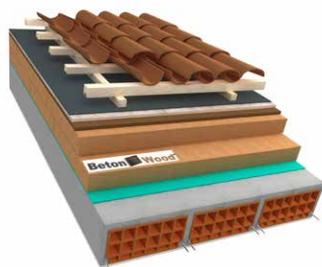


15a. ROOFS

Roof D bitumfiber plus - therm, bitumfiber, cement boards



Ecological roof systems for thermo-acoustic insulation with cement boards density 1350 kg/m³ and wood fiber Therm and bituminous Bitumfiber on concrete

Complete dry system for high-displacement thermal roofs with BetonWood cement bonded particle boards, Therm wood fiber panels and bituminous wood fiber Bitumfiber on concrete structure. Excellent system for insulation of roofs.

STRATIGRAPHY	DESCRIPTION	QUANTITY m ²	PRICE €/m ²	AMOUNT	
1	Roof tiles	Roof tiles			
2	Block-tiles battes	Wooden battens to support tiles, parallel to the eaves line and with a pitch related to the roof tile.			
3	Battens for ventilation	Battens perpendicular to the gutter line directly on the insulating panel, the strips will have suitable fastening all'assito adhesion with the underlying wood, the distance of the strips is to be assessed according to the load of its own structure and the external loading actions.			
4	Anti-steam barrier FiberTherm multi UDB	High airtight sealant vapor barrier for renovation solutions. Extreme ease of installation for safe and simple use. It has an integrated adhesive strip to secure joints and can be used as a temporary cover. Size: 1,50 m x 50 m Roll surface: 75m ² Weight approx.160 g/m ²		0	
5	Cement bonded particle boards BetonWood available thicknesses: 16 mm 22 mm	Pressed cement bonded particle boards with high compactness, density and hardness, resistant to fire, to atmospheric agents, with excellent thermal and acoustic insulation characteristics. The panels are made of Portland-type concrete conglomerate and high-density debarked Pine wood fiber ($\delta=1350 \text{ Kg/m}^3$) and with the following thermodynamic characteristics: coefficient of thermal conductivity $\lambda=0,26 \text{ W/mK}$, specific heat $c=1.88 \text{ KJ / Kg K}$, coefficient of resistance to vapor penetration $\mu=22,6$ and fire reaction class A2-fl-s1, according to EN 13501-1. The dimensions are ... mm for a thickness of ... mm. The wood comes from forests controlled by FSC reforestation cycles and pressed with water and hydraulic binder (Portland cement) with high cold compression ratios.		0	
6	Wood fiber panels Bitumfiber thickness 23 mm	BitumFiber bituminous wood fiber panel is the optimal combination for high strength in dry and wet screed construction. The material is characterized by the following thermodynamic characteristics: density approx. 280 (+20-10) kg/m ³ , coefficient of thermal conductivity $\lambda=0,050 \text{ W/mK}$, coefficient of resistance to vapor penetration $\mu=5$, specific heat $c=2100 \text{ J/Kg K}$ and reaction to fire class E, according to EN 13501-1 standard, CE certified. The wood used in the processing of the panels comes from forests controlled by FSC reforestation cycles.		0	
7	Wood fiber panels Fibertherm 160 (2 layers) available thicknesses: 60+60 mm 80+80 mm 100+100 mm	The panels are made of wood ber with density $\delta=160 \text{ Kg/m}^3$, are produced with a wet system, in compliance with EN 13171 and EN 13986 standards under constant quality control. The material is characterized by the following thermodynamic characteristics: coefficient of thermal conductivity $\lambda=0.039 \text{ W/mK}$, specific heat $c=2100 \text{ J/Kg K}$, coefficient of resistance to vapor penetration $\mu=5$ and reaction to fire class E, according to EN 13501-1 standard. The dimensions are ... mm for a thickness of ... mm. The wood comes from forests controlled by FSC reforestation cycles.		0	
8	Steam brake FiberTherm multi membra 5	Steam brake for better airtightness on the outer side of the roof, resistant to UVrays, excellent adhesion properties and tear resistance. Size: 1,50 mx50 m Roll surface: 75m ² Weight approx.110 g/m ²		0	
9	Concrete roof	Concrete structure with slats and hollow bricks thickness 200+40 mm			
		TAX IVA 22%	0	TAXABLE	0
		TOTAL AMOUNT		0	