

Technical specification of Composite Roof Thermal insulation tile Kelyfos Rooftile® of RAVAGO company.

ADVANTAGES

1. Roof protection from **weather stress**.
2. Protection, of the existing roof waterproofing, against **aging and thermal stress**.
3. **Easy and fast installation** just by placing the Rooftile.
4. **Light weight** (46kg/m²) suitable for roofs with minimum paving loads but also avoiding the risk of being swept away by the wind.
5. **Elimination** of thermal bridges due to special planning on the sides.
6. Usage of the most reliable thermal insulating material of the market, **Ravatherm X PRIME** of RAVAGO
7. Possibility of **reuse** in any addition or extension on the building.
8. **Very attractive** final surface.

Technical Specifications

Properties	Unit	KELYFOS ROOFTILE				Standard
Rooftile dimensions	mm	300x600	300x600	300x600	300x600	
Ravatherm X BF 300 SB thickness	mm	50	60	70	80	
Mortar thickness	mm	20	20	20	20	
Ravatherm X PRIME BF 300 SB thermal conductivity λ_D	W/mK	0,029	0,029	0,029	0,029	EN 13164
Ravatherm X PRIME BF 300 SB thermal resistance R_d	m ² K/W	1,75	2,10	2,45	2,80	EN 13164
Mortar thermal conductivity λ	W/mK	1,395	1,395	1,395	1,395	EN 12667
	Kcal/mh°C	1,20	1,20	1,20	1,20	
Fire classification		B_{ROOF}(t2)	B_{ROOF}(t2)	B_{ROOF}(t2)	B_{ROOF}(t2)	EN 13501-5
Solar reflectance index (SRI)		84	84	84	84	ASTM E1980-11
Ravatherm X compressive strength (10% deformation)	kPa	300	300	300	300	EN 826
Dimensional stability, DS(TH) under specific conditions, temperature T=23°C and humidity Ur=90%	%	<2	<2	<2	<2	EN 1604
Mortar resistance to detachment	N/mm ²	0,25	0,25	0,25	0,25	
Minimum compressive strength of mortar (28 days)	N/mm ²	20	20	20	20	
Mortar abrasion	mm	3	3	3	3	
Packaging						
Weight per m ²	kgr	≈52,10	≈52,70	≈53,00	≈53,30	
m ² per Pallet	m ²	20,16	17,28	15,84	14,40	

INSTALLATION INSTRUCTIONS

Placing composite thermal insulation tile (Kelyfos Rooftile) over the waterproofing layer is the method of Inverted Insulation.

Inverted insulation is the method in which the layer of waterproofing is placed under the layer of thermal insulation. The main advantage of the method is the protection provided to the waterproofing by protecting it from temperature changes and from mechanical stresses, as well as avoiding the phenomenon of water vapor concentration.

Step 1

Creating a drainage layer on the roof slab and installing gutters (if there are none).

Step 2

Roof waterproofing (if not present or damaged). The layer of leaks and waterproofing (especially if done with bitumen) must be very well smoothed to reduce the stresses of Kelyfos Rooftile ® .

- Surface cleaning
- Selection of waterproofing system
- Details sealing

Step 3

The tiles are placed starting from the perimeter, in an arrangement of interrupted joints by matching the special shiplaps, in order to improve the stability and passability of the roof. In roofs with increased passability, it is necessary to improve the quality of the substrate. If deemed necessary, a geotextile layer is applied first.

- laying geotextile
- installation of Kelyfos Rooftile ®.

Step 4

In order to cover the perimeter gap that is created, it is recommended to use gravel or pebble.

The joints between the tiles must not be sealed under any circumstances and in addition the horizontal movement of Kelyfos Rooftile ® must also be avoided (this is ensured if the screed ends at the perimeter of the roof elevations such as walls or parapets).

In buildings exposed to strong winds, it is possible to require vertical immobilization of the slabs by fixing the first perimeter zone using a metal corner or another mechanical way of fixing.