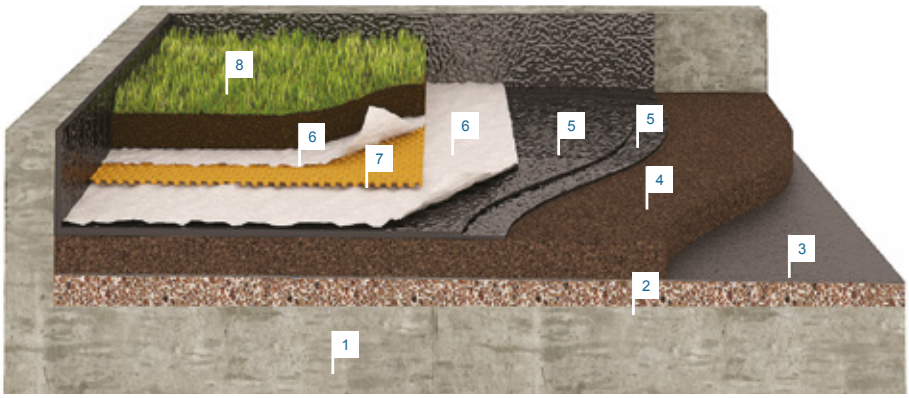
Flat Roof Insulation Tradicional System

ROOFS ARE EXPOSED TO GREAT THERMAL AMPLITUDES

On a traditional roof, the insulation serves to support the waterproofing and there is a need to place a barrier to the steam under the insulating material owing to the permeability of this solution to steam. The protection layer (light or heavy) depends on accessibility to the roof. Expanded Cork Board are practically inert and wholly compatible with most of the materials deployed in civil construction, thereby accepting the application of the waterproofing system (asphaltic membrane, waterproofing mortars, membranes etc.), avoiding the carrying out of screeds, namely on roofs with limited accessibility when restoring buildings.
Traditional roofing types:
- Insulation with light protection (self-protected)
- Insulation with heavy protection (gravel, slab surfaces etc.).
ICB is the most ecological solution, maintaining its characteristics over time, simultaneously satisfying thermal insulation and soundproofing requirements when faced by the most varied thermal amplitudes.

GREEN ROOF



1. Slab 2. Light concrete with cork/formation of slope 3. Steam barrier 4. Expanded Cork Board - ICB 5. Waterproofing 6. Geotextile layer 7. Drainage layer 8. Vegetal layer

Benefits

Stability to waterproofing	**Usage temperature: -180ºC to +140ºC**
Safe installation	**Excellent soundproofing**
Resistant to wind strength	**Durability**
Excellent thermal delay	

Excellent properties

THERMAL DELAY - The thermal calculation is based on the thermal conductivity value of the insulating materials and the exterior temperature differences are deemed to be negligible. However, the temperatures of the exterior surfaces (for example, on the roofs) are subject to thermal amplitudes 24 hours a day. This temperature variation, typical of Mediterranean countries, leads us to consider not only thermal conductivity, but also the thermal inertia of the materials, resulting in a delay in the propagation of heat flow from the exterior to the interior. This thermal delay will be greater, the larger the heat capacity and the lower the thermal diffusivity of the materials going to make up the roof. The economic thickness calculations of the thermal insulations should bear in mind not only the thermal conductivity value but also its thermal diffusivity. The Expanded Cork Board - ICB has the edge in the latter aspect compared with the thermal insulations usually used.

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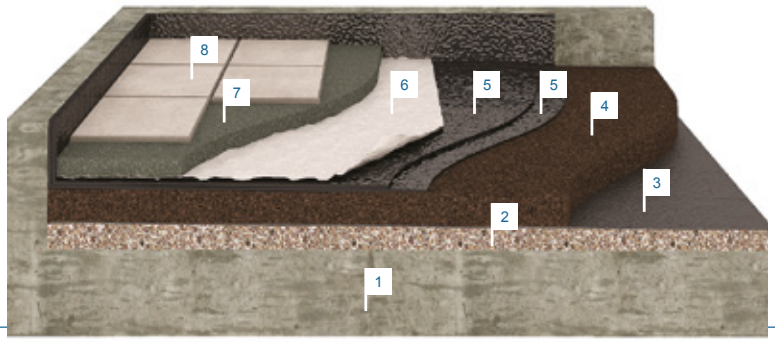
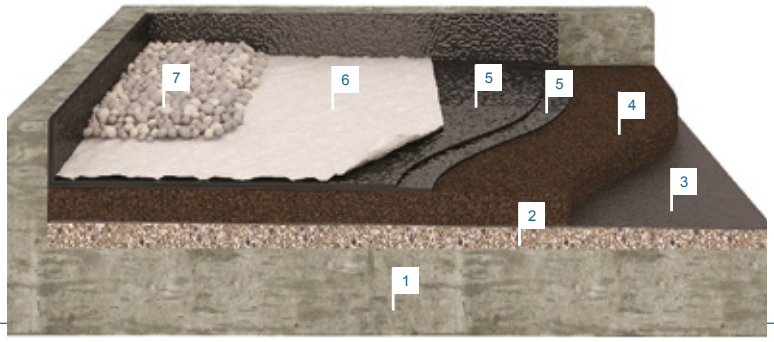
Flat Roof Insulation Traditional System

THERMAL INSULATION AND SOUNDPROOFING - ROOFS WITH UNLIMITED ACCESSIBILITY



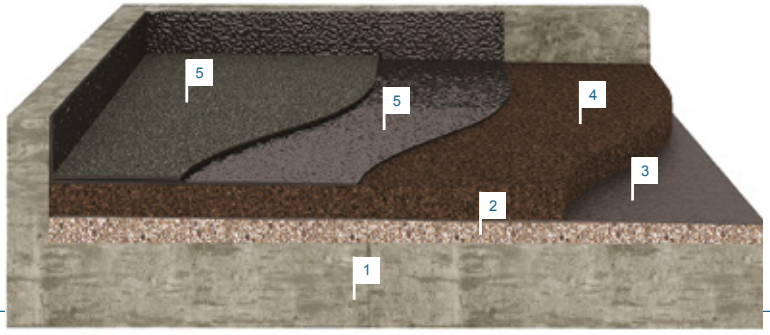
1. Slab
2. Light concrete with cork/formation of slope
3. Steam barrier
4. Expanded Cork Board - ICB
5. Waterproofing
6. Geotextile layer
7. Screed
8. Final finish

THERMAL INSULATION AND SOUNDPROOFING - REFLECTIVITY SOLUTION



1. Slab
2. Light concrete with cork/formation of slope
3. Steam barrier
4. Expanded Cork Board - ICB
5. Waterproofing
6. Geotextile layer
7. Rolled pebble

THERMAL INSULATION AND SOUNDPROOFING - ROOFS WITH LIMITED ACCESSIBILITY



1. Slab
2. Light concrete with cork/formation of slope
3. Steam barrier
4. Expanded Cork Board - ICB
5. Waterproofing with schist granulate finish