

LEYCO[®]-TILE

INSULATING TILE FOR ROOFS AND WALLS

Description

LEYCO-TILE is an insulating tile made from high strength polymeric concrete laminated to extruded polystyrene foam.

The layer of foam which provides the insulation is characterised by its rigid and homogeneous closed cell structure, its high compressive strength, and its extraordinary high thermal insulating properties, which are maintained even after the foam has been subjected to damp or wet conditions, unlike conventional alternative systems.

Equivalent insulation values - Extruded polystyrene foam, and typical foam concrete.

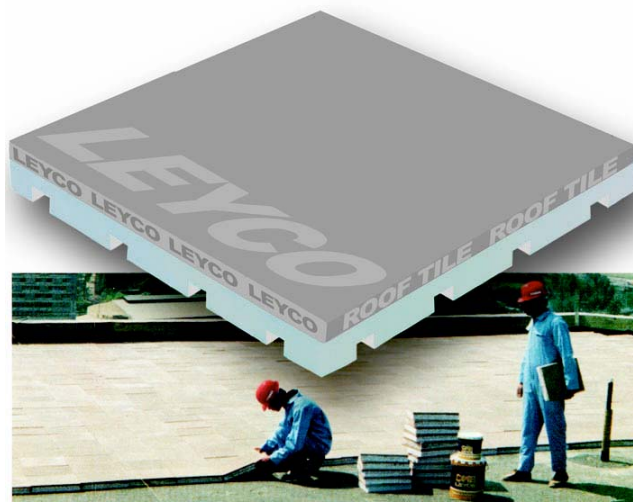
Extruded polystyrene foam	equivalent to	Typical foam concrete
2 cm		10 cm.
3 cm	"	15 cm.
5 cm	"	25 cm.

The layer of polymeric concrete covers and protects the foam insulation layer, and is composed of resin-modified portland cement, selected siliceous aggregates, and admixtures.

The resulting tile has excellent strength, low shrinkage, good surface hardness and excellent impact resistance.

The polymer topping and extruded polystyrene are securely bonded both, chemically and mechanically during manufacture, to ensure a long and trouble free service life, even when subjected to extreme conditions.

LEYCO-TILE is an ideal product for use in the inverted roofing system. LEYCO-TILE is laid over the waterproofing membrane LEYCOPLAST, which is applied directly onto the roof deck. LEYCO-TILE protects the waterproofing membrane from the severe stresses caused by UV-radiation, temperature cycling and from mechanical damage.



Advantages

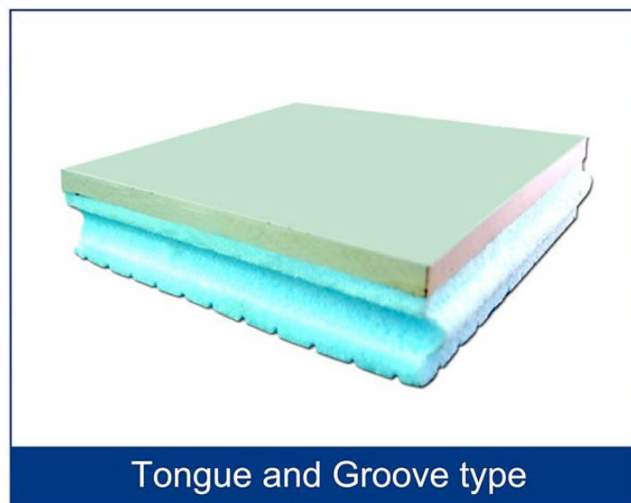
Reduced permanent loads on roofs. Approx. weight LEYCO-TILE and waterproofing is only 30 kg/m², which is extremely beneficial when upgrading old roofs.

One step application resulting in substantial cost savings.

Eliminates the need for a vapour barrier. Benefit cost saving.

Good drainage of rain water without the need for a sloping screed. Benefit cost saving.

Reduced maintenance costs, easy lifting for inspection. Benefit cost saving.



Tongue and Groove type

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Properties. Insulation layer

Composition. Extruded polystyrene foam
 Density. DIN 53420. 32-35 Kgs/m³.

Thermal conductivity
 DIN 52612 lab value at
 10 degree C. mean temp. 0.027
 W/m.K.

Thermal conductivity
 5 years aged, at 24
 degree C. mean temp. 0.032
 W/m.K.

Compressive strength at
 10 % deflection.
 DIN 53421. 3.0 Kg/cm²
 (typical)

Absorption (immersed)
 DIN 53428 0.2% by volume.
 ASTM 2842 Less than 1 %.
 Absorption (capillary) none.

Fire classification.
 DIN 4102 B1. difficult to
 ignite.

Properties. Cementitious topping.

Composition Polymer modified
 concrete.
 Compressive strength
 ASTM C 42 Min. 40.0 N/mm²

Flexural strength.
 ASTM 293. Min. 7.5 N/mm²

Hardness (Moh's)
 ASTM C851. 4.0

Installation Procedures

Remove dust, grease, oils, and any other foreign material from the concrete surface to which the waterproofing material is to be applied.

Rain water outlets should be laid at the level of the waterproofing layer. The joint between the outlet and the concrete slab should be sealed with a mastic material such as LEYCO-KV.

To ensure a good seal between walls and install 50 mm x 50 mm angle fillets using cement mortar and LEYCOBOND-H at a rate of 30 kg/m³.

Waterproofing

Apply a primer coat of LEYCOPLAST-SM or LEYCO-TEKT 1 or LEYCO-TEKT 3 at a rate of 0.3 kg/m².

Apply 2 or 3 coats of LEYCOPLAST at a rate of 0.5 to 0.7 kg/m². Total cover rate should be not less than 2 kg/m².

Coarse grained sand can be sprinkled over the final layer of waterproofing to give a key to the mortar, if mortar used to lay the LEYCO-TILE.

LEYCO-TILE

Accessible roofs

The TILE is laid over the waterproofing layer using sand cement mortar, mixing ratio approx. 1 part cement to 6 to 7 parts sand or dry sand to be mixed with LEYCO-TEKT binder in the ratio 1:7. To increase bond strength, LEYCOBOND-H may be added at a rate of 30 kg/m³ to the cement mortar.

Any drainage slopes required on the surface can be formed by the bedding mortar

A joint of approx. 4 mm should be left between the tiles, this joint can be filled with a fine sand/cement mix then vapour sprayed, or alternatively left opens. Any expansion joints in the concrete slab should be incorporated in the TILE.

Non accessible roofs.

The TILE can be loose laid on accessible roofs, or roofs where foot traffic is minimal.

Dimensions

Standard tiles. - 29.6 x 29.6 cms. With 4 mm joint there are 11 tiles to m² required.

Topping Minimum thickness 10 mm.
 Insulation 2 cm, 3 cm or 5 cm as standard

Colours

Standard colour is concrete grey. Other colours can be supplied on request if sufficient quantities are requested

Texture

Standard texture is flat smooth, other textures can be supplied on request if sufficient quantities requested.

Legal notes

Whilst information and/or specification contained herein is to the best of our knowledge true and accurate, and is based on many years experience, we cannot accept any liability either directly or indirectly arising from the use of our products, whether or not in accordance with any advice, specification or recommendation given by us, as we have no direct or continuous control over how or where our products are applied.

LEYDE-PRODUCTS are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale. 30.09.2011