



## Expanded Clay Aggregate (ECA) - TILE

### Roof Top Thermal Insulation Tile

**Expanded Clay Aggregate (ECA)** is a round pellet structure produced by firing natural clay at 1200°C temperature. The result is a hard ceramic, honeycomb structure of interconnected voids within the aggregate.

**Expanded Clay Aggregate (ECA)** is an extremely light weight and thermally insulating material.

Expanded Clay Aggregate (ECA) Tile is introduced **1st** time in India.

Temperature Difference: up to 11°C ( subject to standard conditions applicable )

### TECHNICAL PARAMETERS

Expanded Clay Aggregate (ECA) Tile Dimension	Expanded Clay Aggregate (ECA) Tile Unit Weight	Thermal Conductivity	Surface Colour
300 mm X 300 mm X 40 mm app.	3.5 – 4 kgs app.	0.367 W/m.K (ASTM C-177)	Plain White

\* High resistance to water absorption

### KEY FEATURES

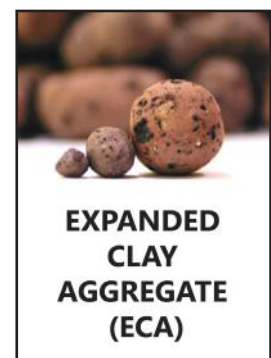
- Improves the thermal behavior of a building and saves electricity consumption.
- High thermal insulation efficiency, which does not change with time.
- Protects from thermal cycling effect and increases the building life.
- Light in weight and strong.
- Easy application and maintenance free.

### LAYING

Same as conventional ceramic tile laying technique with 4-5 mm groove between tiles. P.S. Waterproofing is must before laying the tiles.

### GROOVE FILL

After setting of Expanded Clay Aggregate (ECA) Tile, fill the joints by mixture of fine sand + normal cement mortar or any other cementitious material.





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#### Test Certificate Reference

National Laboratory for Testing and Development of Thermal Insulations

A project under the National Facilities in Engineering and Technology with Industrial Collaboration ( NAFETIC )  
 Scheme of AICTE

**Test Type:** Determination of thermal conductivity

**Test method:** Guarded Hot Plate Method as per **ASTM C177**

**Specimen Details:** Expanded Clay Aggregate (ECA) Roof Insulation Tile

**Description of Product:** Expanded Clay Aggregate (ECA) Roof Insulation Tile is a composite material made from ceramic tile, cement, Ash and Expanded Clay Aggregates (ECA).

**Moisture Content:** Nil ( Sample preheated at 70°C in oven for 24 hours before testing for thermal conductivity )

**Dimensions:** 294 mm X 294 mm

**Average sample thickness (as tested ):** 39 mm

**Density:** 976.79 kg/m<sup>3</sup>

#### TEST RESULTS

Mean Specimen Temperature (°C)	Observed Apparent Thermal Conductivity Value (W/m.K)	Observed Resistance Value (m <sup>2</sup> .K/W)
30	0.3679	0.106