Terraco ecoTHERM System is an energy efficient thermal wrapping applied to the exterior surface of a building. The System is finished with a long-life, decorative and protective coating system.

The use of Terraco ecoTHERM System can substantially reduce heating or cooling costs and also allows for the use of lower specification heating systems. As Terraco ecoTHERM System is an energy efficient system, it consequently also helps reduce green-house gas emissions.

Terraco ecoTHERM System can be used on both old and new constructions. As it is applied as an exterior system, it is highly suitable for upgrading older buildings to reduce operating costs while giving a new attractive finish.

Terraco ecoTherm System

- Terraco Styrofix Adhesive
- Insulation Board
- Mechanical Fastener
- Terraco Styrobond DP basecoat
- Fiberglass Mesh 160 g/m²
- Decorative Finish - Terracoat Excel/Granule
- Accessories
Superior Energy Efficiency

Terraco ecoTHERM System wraps the exterior of the building in an energy-efficient thermal blanket, which reduces heat transmission. The interior environment is stabilized and energy consumption is reduced. Terraco ecoTHERM reduces heat transmission by up to 55% compared to uninsulated conventional constructions. Uninsulated walls are one of the largest exuders / absorbers of heat and the introduction of wall insulation will greatly reduce energy consumption and heating costs.

Design Flexibility

The use of Terraco ecoTHERM introduces substantial design flexibility. As the insulation is placed on the outer surface, the use of a cavity wall structure can be avoided. This allows for the use of various alternative wall designs such as timberframe, steel frame, precast concrete and cast-in-situ concrete structure.

Terraco EIFS has Superior Resistance to Fading, Chalking & Yellowing

Terraco ecoTHERM System will outperform other insulation options by maintaining its original appearance over time. The system is finished with Terracoat acrylic and silicone coatings that can withstand extreme climatic conditions.

Condensation Control

Using an insulation layer on the outer surface makes good building sense particularly in cold humid climates. It eliminates the problem caused by the ingress of water vapour and associated condensation which can cause problems when insulation is installed on inner surfaces.

Increased Interior Floor Space

Using an exterior insulation system allows for better use of inner floor space. The interior wall thickness can be reduced by as much as 100mm allowing for an increase in floor space of up to 4%.
Method of Application

Step 1  PROFILE INSTALLATION

- Fix bearing profiles at 50cm intervals, start 25cm above ground level.

Step 2  FIXING INSULATION BOARDS

- Spot method (5kg/m²) - Used on uneven substrates. Apply Styrofix adhesive to the external edges and to 5-6 inner spots of the back side of the insulation board, ensuring to cover 40% of the surface area.

- Notched trowel method (4kg/m²) - Used on even substrates. Apply Styrofix adhesive to the entire back surface at the insulation board using a notched trowel.

In both cases, the insulation board sides should be kept clean to ensure the boards can be fitted tightly side by side, thus avoiding any thermal bridging.

Allow to dry for 24 hours before proceeding to the next step.

Step 3  THE MECHANICAL FASTENERS

- Mechanical fasteners are fixed directly through the uncoated board after a minimum of 24 hours.

- Fasteners should penetrate 4cm into brick or concrete substrates.

- A minimum of 4-6 fasteners/m² should be used.

- Fasteners should be made of plastic to avoid thermal bridging.
**Step 4  BASECOAT AND FIBREGLASS MESH APPLICATION**

- For corners, use PVC corner profile with 10 - 15 cm fibreglass mesh to give straight edges fixed with Styrobond DP
- Apply a coat of Styrobond DP by hand or spray to an approximate thickness of 2mm and immediately embed the glass fibre mesh into surface by travelling from centre out to avoid any wrinkles. Achieve a thickness of minimum 1.5mm (2.5kg/m²).
- Overlap all fibre glass mesh edges by 10cm.
- Apply a further coat of Styrobond DP to achieve an overall thickness of 3mm (5kg/m²).
- In high usage areas, such as at ground floor level, 2 layers of fibre glass mesh and a further coat of Styrobond DP are used to increase impact resistance.

**Step 5  THE DECORATIVE FINISH**

- Allow the final layer of the Styrobond DP to cure for 72 hours and apply a coat of TerracoPenetrating Primer.
- Terraco ecoTHERM is finished with Terracoat Textured Coating such as Terracoat Excel, Terracoat Granule or the silicone versions Terracoat Excel Sil or Terracoat Granule Sil. Terracoat Excel is applied by Trowel and Terracoat is finished either by trowel or spray. In all cases the Terracoat finish should have a thickness of 1.5mm which equates to 2.5kg/m².

**System Summary**

<table>
<thead>
<tr>
<th>Function</th>
<th>Product</th>
<th>kg/m²</th>
<th>Thickness</th>
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<tbody>
<tr>
<td>Adhesive</td>
<td>Styrofix</td>
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<td>Insulation Board</td>
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<td></td>
<td>16kg/m² density</td>
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<td></td>
<td>Fire retardant grade</td>
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<td>Basecoat</td>
<td>Styrobond DP</td>
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<td>Fibre Glass Mesh</td>
<td>Eco Therm glass fibre mesh (Alkali resistant grade)</td>
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<td>Primer</td>
<td>Penetrating Primer</td>
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<tr>
<td>Decorative Finish</td>
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<td>Terracoat Textured Coating - Excel Sil</td>
<td>2.5</td>
<td>1.5 mm</td>
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</tbody>
</table>

* Please note that Terraco ecoTHERM can be used with Expanded or Extruded Polystyrene as well as Mineral Wool boards (ex. Rockwool). Required thickness of board will depend on desired level of insulation.
Projects

Before

A renovation project before and after installation of Terraco ecoTHERM - as viewed by Thermal Infrared Imaging camera.

After

Terraco ecoTHERM is the system of choice in Yakutia, Siberia - arguably the coldest region in the Northern Hemisphere. Temperatures here regularly drop to -60° centigrade.
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