

Product technical specification

Revision Date:

TDS Number:

Product name: thermal insulation decorative integrated board

version: V 3.1

Product profile

Wanhua insulation decoration integrated board is a new insulation decoration wall material through continuous foaming technology, with vertical silk rock wool or hard foam polyurethane as the core material, the upper surface is the decorative panel, and the lower surface composite interface reinforced coil formed at one time. It mainly includes PRR insulation decorative board and polyurethane insulation decorative board two types.

The decorative surface layer mainly includes ceramic sheet veneer, cement fiber pressure plate veneer, metal veneer, composite brick veneer and other series.

Product characteristics

- 1, the decorative panel is thin, the decorative effect is rich;
2. Excellent mechanical properties;
- 3, Paste + anchorage double insurance, high safety;
- 4, the interface layer without cavity, do not fall off;
- 5, simple operation, less construction process, short construction period;
- 6, three waterproof system, good waterproof performance.

Performance Index

Project	Wanhua PRR Thermal Insulation Decoration Panel	Rock Wool Insulation Decoration Panel
Production Process	Continuous Microcellular Infusion Self-adhesive Foaming Process / High Production Efficiency (Capacity: 2,500 m ²	Adhesive Bonding Method / Batch Process / Low Production Efficiency (Capacity: 800 m ² per 8-hour shift)

	per single production line in 8 hours)	
Base Liner Material	Cement-Based Interface Reinforcement Membrane	Calcium Silicate Board
Characteristics of the Base Liner	<p>Thickness: 0.45mm (reduces insulation board weight by ~15-20% for easier handling and transport)</p> <p>Safety-enhanced design (passes EN 13501-1 fire safety standards)</p> <p>Embedded reinforcement mesh:</p> <ul style="list-style-type: none"> • Mesh type: Fiberglass grid (120-160g/m²) • Stress distribution: Improves flexural strength by 30% (ASTM C203) • Deformation control: Limits thermal expansion to ≤0.5mm/m (EN 1607) 	<p>The 4mm thickness significantly increases the dead load of the insulation decorative panel system while exhibiting low shear resistance. The material demonstrates high water absorption and poor water/freeze-thaw durability, with a strength reduction exceeding 25% after 25 freeze-thaw cycles. Notably, the calcium silicate board shows inadequate compatibility with bonding mortar, leading to frequent delamination failures.</p>

Production Engineering

Wanhua thermal insulation decorative board adopts the domestic advanced continuous production process. Compared with the traditional mold method and bonding production process, the continuous method is easier to realize the rock wool layer and the interface layer without cavity bonding. The whole production process is real-time dynamic monitoring, the product quality is stable and controllable, and the production efficiency is 10 times higher than the traditional production process.

For more information, please refer to the safety technical manual for our products or contact our customer service center

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customer service center is willing to provide you with product consulting and application technology services, welcome to contact.

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