

Product Technical Manual

Revision Date:

TDS Number:

Product Name: Polyurethane Rock Wool Composite Board

Version: V 3.0

Product Introduction

Polyurethane Rock Wool Composite Board (PRR Board)

Executed Standard: Q/0600WHE 027-2025

The Polyurethane Rock Wool Composite Board is a novel insulated decorative wall material (abbreviated as PRR Board) manufactured through integrated molding. It features vertical filament rock wool as the core material, bonded integrally with rigid polyurethane foam via continuous foaming technology, and is laminated with surface reinforcement coil materials on both sides.

Applications:

Class A fire-rated external wall insulation for buildings.

Fire barrier zone material for organic insulation materials.

Standard Dimensions: 1200mm × 600mm (Customizable)

Insulation Layer Thickness: 20mm – 100mm

Product Features

1. Class A fireproof
2. Excellent waterproof performance
3. Superior mechanical properties
4. Bidirectional affinity interface reinforced membrane with high bonding strength
5. Low thermal conductivity, good energy-saving and thermal insulation effect
6. Optimized construction environment, reducing harm to the human body

Performance Indicators

Project			PRR Insulation Board
System	Weather Resistance	Appearance	No visible cracks, powdering, or peeling on the finish; no hollowing in the protective layer
		Tensile Bonding Strength, kPa	≥ 100
	Freeze-Thaw Resistance	Appearance	After 30 freeze-thaw cycles, no visible cracks, powdering, hollowing, or peeling in the protective layer
		Tensile Bonding Strength, kPa	≥ 100
Board	Tensile Strength Perpendicular to Board Surface, kPa		≥ 100
	Compressive Strength (10% Deformation), kPa		≥ 40
	Thermal Resistance		Meets designed thermal resistance value
	Water Absorption, kg/m ² (partial immersion)	24h	≤ 0.5
		28d	≤ 1.0
	Hydrophobic Rate, %		99.4
	Longitudinal Shear Strength, kPa		102

Index Comparison

	Polyurethane Rock Wool Composite Panel	Common rock wool board
Effective Bonding Area	≥ 50%	100%
Plaster Layer Thickness	4-6mm	7-10mm
Reinforcing Mesh	Single-Layer Glass Fiber Mesh	Double-layer glass fiber mesh or steel wire mesh
Anchor Disk Diameter	60mm	140mm
Labor Cost	Low cost	Higher cost
Construction Environment	No harm to operators	Harmful to skin and respiratory system
Waterproof Interface Treatment	Prefabricated	On-site painting

Production Process

The Polyurethane Rock Wool Composite Panel adopts the advanced domestic continuous production process. Compared with the traditional molding and bonding methods, the continuous process more easily achieves cavity-free bonding between the rock wool layer and the interface layer. The entire production process is under real-time dynamic monitoring, ensuring stable and controllable product quality, with production efficiency increased by 10 times compared to traditional processes.

For more information, please refer to the Safety Data Sheet (SDS) of our products or contact our Customer Service Center.

The indicators and data provided in this document are based on our current level of

technical knowledge and practical experience, and are for reference only. Specific guaranteed indicators are subject to the quality assurance certificate or supply contract. The user is responsible for testing the products purchased from our company to verify their suitability for their intended processes and applications, and to achieve the desired objectives. Further application and processing of our products are beyond our control. Therefore, our liability for the products provided is limited to the portion delivered by us and used by you. We do not assume responsibility for indirect losses incurred during the production process using our products as raw materials. Our technical support and customer service center are available to provide consultation and technical services related to our products. We welcome your inquiries and communication via mail or phone.

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