

# Product Technical Manual

Revision Date:

TDS Number:

Product Name: PRF Rock Wool Composite Polyurethane Fire-Resistant  
Insulation Panel

Version: V 3.0

## Product Introduction

PRF rock wool composite polyurethane fireproof insulation board is a new generation of integrated insulation product (abbreviated as: PRF board) that combines insulation and fireproofing. It is prefabricated by continuously foaming rigid polyurethane between vertically oriented rock wool boards and reinforced facing materials, utilizing the permeability and self-adhesive properties of polyurethane. The thickness of the vertically oriented rock wool board is not less than 45mm, and the thickness of the polyurethane can be determined based on the calculated thermal transmittance requirements of the wall.

Advantages: No need for fire-rated doors and windows, no need for fire barriers, the insulation system is equivalent to Class A fire rating, and there are no restrictions on application height or location.

Standard Dimensions: 1200mm \* 600mm (customizable)

Thickness: 50mm - 150mm.

Application Scope: Exterior wall insulation for buildings requiring Class A fire rating; regions with high energy efficiency demands, such as severe cold and cold zones; ultra-low energy buildings.

## Product Features

- 1、Structural fire performance equivalent to Class A;
- 2、Superior mechanical properties;;
- 3、Excellent waterproofing performance;
- 4、Low thermal transmittance, thus preventing thermal bridging;
- 5、High interfacial bond strength;
- 6、Simple construction process, short installation cycle, and low system-wide cost.

## Performance Metrics

Rock Wool Board (mm)	Fireproof Rock Wool-Polyurethane Composite Insulation Board (mm)	Polyurethane & Rock Wool Composite Material	
		PU	RF
85	60	15	45
100	70	25	45
150	85	40	45

Rigid polyurethane foam's ultra-low thermal conductivity coefficient and excellent insulation properties compensate for the shortcomings of single-layer rock wool boards, which have higher thermal conductivity and poorer thermal insulation performance. This thereby reduces the thickness of the external wall insulation system and the building's plot ratio.

## Production Process

Wanhua's PRF boards adopt China's advanced continuous production process. Compared with traditional mold and bonding methods, the continuous method more easily achieves cavity-free bonding between the rock wool layer and the interface layer. The entire production process undergoes real-time dynamic monitoring, ensuring stable and controllable product quality. Production efficiency is 10 times higher than with traditional manufacturing processes.

## System Process

The PRF external insulation system adopts a "bonding and anchoring" construction method, providing dual safety mechanisms.

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

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