

Product technical specification

Revision Date: 2021-06-01

TDS Number:

Product name: B2-Class Rigid Polyurethane Spray Foam Composition for Interior Walls

Version: V 3.1

Product Introduction

The B2-grade polyurethane rigid foam spraying composite material for interior walls uses an environmentally friendly foaming agent with ultra-low thermal conductivity. When applied with WANNATE®2208, it can be used on cement surfaces, brick surfaces, wood surfaces and other substrates, featuring strong adhesion, excellent dimensional stability and outstanding flame retardancy. The material achieves B2 fire rating (GB 8624-2012).

Product Application

The B2-grade polyurethane rigid foam spray composite for interior walls is a fast-curing system that provides immediate load-bearing capacity, making it suitable for most spray insulation applications.

Before using the B1-grade polyurethane rigid foam spray composite for interior walls, preliminary testing must be conducted to ensure the reliability of the composite system for the specific project.

Physicochemical Properties

Item	Primary Technical Translation
Primary Technical Translation 25°C, mPa·s	40~250
Density, g/cm ³	1.10±0.10

Color

Pale yellow to yellow

Free Foaming Parameters

Item	Primary Technical
Cream Time, s	2~3
Gel Time, s	8~10
Tack-free Time, s	10~13
Free-Rise Density, kg/m ³	27~33

Physical Properties

Item	Primary Technical
Density, kg/m ³	≥37
Density, W/(m·K)	≤0.024
Compression Properties (Deformation 10%), kPa	≥150
Dimensional Stability (70°C, 48h), %	≤1.5
Closed-cell Content, %	≥90
Water Absorption Rate, %,	≤3

(1) For B2-grade polyurethane rigid foam spray composite applied to interior walls:

Required material temperature: 25 °C

Mixing ratio by volume: 1:1

Manual mixing method: Electric stirring at 2500 rpm

(2) When processed according to the operational precautions specified in this document:

High-pressure spray equipment yields foam products with overall density >37 kg/m³

(3) Technical note:

All values provided represent typical test data. Actual performance may vary slightly depending on environmental conditions. For our company's products, these specifications do not constitute legally binding parameters.

Precautions for Use

The construction equipment used for spraying B2-grade rigid polyurethane foam composite materials on interior walls is a high-pressure spray machine. Before construction, please check and calibrate the delivery ratio and mixing pressure of the black and white materials in the high-pressure spray machine.

The ambient temperature for spraying operations should ideally be between 10 °C and 40 °C, with a wind speed not exceeding 5 m/s (Force 3 wind) and relative humidity below 75%. Construction must not proceed in rainy weather. If the ambient temperature during construction is below 10 °C, reliable technical measures must be taken to ensure spraying quality.

During spraying operations, ensure the temperature of the black and white materials entering the spray gun is above 30 °C, and the substrate must be dry and clean. Control the foam thickness per spray pass within the range of 1–1.5 cm (excluding the base layer). During construction, the next layer of polyurethane foam can only be applied after the previous layer's surface is no longer tacky. Other relevant standards shall comply with national regulations. If the above conditions are not met, all responsibilities shall be borne by the buyer.

Spraying operations shall comply with GB 50404-2017 "Technical Code for Rigid Polyurethane Foam Thermal Insulation and Waterproofing Engineering."

The construction site must be a no-fire zone with good ventilation, kept away from ignition sources, and smoking is strictly prohibited. If hot work is being conducted nearby, a fire permit system must be strictly implemented, along with appropriate safety measures and dedicated supervision.

Before the formal construction of the project, the buyer must conduct tests under conditions consistent with the actual construction environment to ensure the reliability of the composite material system for this specific project.

Once formal construction begins, it will be deemed that the buyer has approved the product's performance as qualified. If the above procedures are not followed, all responsibilities shall be borne by the buyer.

Packaging Specifications

200L green steel drum.

Storage (Usage) Precautions

The composite material must be stored in a tightly sealed container to prevent moisture absorption. Therefore, during storage and transportation, the container must remain dry and airtight.

B2-grade rigid polyurethane foam spray composite material for interior walls should be stored in a cool, ventilated area at room temperature (5–35 °C), protected from direct sunlight. Prolonged storage above 40 °C should be avoided, as it may cause excessive foaming agent evaporation, compromising storage stability and product performance.

Shelf Life

Under proper storage conditions, the shelf life of B1-grade rigid polyurethane foam spray composite material for interior walls is 6 months. After this period, the material may continue to be used if it passes quality inspection.

Safety Precautions

Direct contact with B2-grade rigid polyurethane foam spray composite material for interior walls may cause moderate eye irritation and mild skin irritation, and may lead to skin allergies. Repeated inhalation of high-concentration vapors can cause respiratory allergies. Immediate medical attention should be sought, with anti-inflammatory and anti-allergic symptomatic treatment measures administered.

During operation, exercise caution to prevent direct skin contact and splashing into the eyes. Necessary protective equipment (gloves, goggles, work clothes, etc.) must be worn.

In case of contact with skin or eyes, immediately rinse with plenty of water for at least 15 minutes. Wash skin with soap and water, and seek medical attention if necessary. If ingested, seek immediate medical treatment for symptomatic care.

Fire and Explosion Hazards

This product is not classified as a flammable liquid, explosive, oxidizer, corrosive, toxic substance, or radioactive hazard during storage and transportation, and does not fall under hazardous materials regulations.

Fire Extinguishing Media:

Carbon dioxide, foam, or dry chemical powder extinguishers may be used. In the absence of other extinguishing agents, large amounts of water spray may be applied. Once the fire is extinguished, spilled material must be thoroughly cleaned (refer to "Spill Handling Procedures").

Firefighting Procedures:

Standard protective measures apply.

Spill and Leakage Handling

Small leaks or spilled material can be washed away with water. In case of large leaks, contain and recover the material, and clean the contaminated ground with water or detergent. Disposal of waste composite material must comply with local government environmental regulations.

For more information, please refer to our product's Safety Data Sheet (SDS) or contact our Customer Service Center.

The specifications and data provided in this document are based on our current technical knowledge and practical experience, and are for reference only. Guaranteed specifications shall be exclusively governed by the Quality Warranty Certificate or supply contract.

The customer is responsible for conducting tests to verify whether the purchased products are suitable for their intended processes and applications, and whether they achieve the desired objectives.

As further application and processing of our products are beyond our control, our liability is strictly limited to the products delivered to and accepted by the customer. We shall not be liable for any indirect damages arising from the use of our products as raw materials in production processes.

Our Technical Support and Customer Service Center remains available to provide product-related consultation and application technical services. Please feel free to contact us by letter or phone.

Address: Wanhua Energy-Saving Technology (Yantai) Co., Ltd.

No. 56 Taiyuan Road, Yantai City, Shandong Province, China

Email: mouwen@126.com
