Product technical specification

Revision Date：2021-06-01 TDS Number：

oduct name：B1 Grade Rigid Polyurethane Foam Spray Composite Material for Interior Wall Applications

Version： V 3.1

Product Introduction

B1 Grade Rigid Polyurethane Foam Spray Composite Material for Interior Walls

This material uses an ultra-low thermal conductivity, environmentally friendly blowing agent. When combined with WANNATE® 2208, it produces foam products with excellent flame retardancy, achieving a B1 fire rating (GB 8624-2012).

The B1-grade rigid polyurethane foam spray composite material for interior walls can be applied on various substrates, including concrete, brick, wood, and other surfaces, offering strong adhesion and outstanding dimensional stability.

Product Application

This product is designed for spray-applied thermal insulation in cold storage facilities, food processing plants, chemical plants, industrial buildings, and residential buildings (interior wall applications).

The B1-grade rigid polyurethane foam spray composite material for interior walls is a fast-curing system that achieves immediate load-bearing capacity, making it suitable for most spray foam insulation requirements.

Important Notice: Prior to application, field testing must be conducted to verify the material's reliability for the specific project conditions.

Physicochemical Properties

Item	Primary Technical Translation
Primary Technical Translation25°C, mPa•s	40~250
Density，g/cm^3	1.10±0.10
Color	Pale yellow to yellow

Free-Rise Foaming Parameters

Item	Primary Technical Translation
Cream Time，s	1~3
Gel Time，s	5~8
Tack-free Time，s	10~12
Free-Rise Density，kg/m^3	35~41

Physical Properties

Item	Primary Technical
Density，kg/m^3	≥45
Thermal Conductivity，W/(m ｋ)	≤0.024
Compression Properties（Deformation10%），kPa	≥200
Dimensional Stability（70℃，48h），%	≤1.5
Tensile Bond Strength（with cement mortar, at room temperature），Mpa	≥0.10
Water Absorption，%	≤3

(1) Application Requirements for B1-grade Rigid Polyurethane Foam Spray Composite for Interior Walls:

Material temperature: 25 ℃

Mixing ratio: 1:1 by volume

Mixing method: Manual blending with electric mixer (2,500 rpm)

(2) Operational Note:

When processed with high-pressure spraying equipment according to the guidelines in this document, the foam product shall achieve an overall density >45 kg/m³.

(3) Technical Disclaimer:

The values provided herein are typical experimental data. Actual performance may vary slightly due to environmental conditions. For our company's products, these data are not legally binding specifications.

Usage Precautions

The B1-grade rigid polyurethane foam spray composite material for interior walls should be applied using a high-pressure spraying machine. Before construction, ensure the delivery ratio and mixing pressure of the black and white materials in the high-pressure spraying machine are calibrated and adjusted.

The optimal ambient temperature for spraying should be between 10 ℃ and 40 ℃, with wind speed not exceeding 5 m/s (Force 3 wind), relative humidity below 75%, and no construction during rainy weather. If the ambient temperature is below 10 ℃ during construction, reliable technical measures must be taken to ensure spraying quality.

During spraying, the temperature of the black and white materials entering the spray gun should be controlled above 30 ℃, and the substrate must be kept dry and clean. The thickness of each foam layer (excluding the primer) should be maintained between 1–1.5 cm. Before applying the next layer, the previously sprayed polyurethane foam surface must be non-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 conducted nearby, a fire permit system must be strictly enforced, along with appropriate safety measures and dedicated supervision.

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

Once formal construction begins, it will be deemed that the buyer has acknowledged 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 sealed container to prevent moisture absorption. During storage and transportation, ensure the container remains dry and airtight.

The B1-grade rigid polyurethane foam spray composite material for interior walls should be stored in a cool, ventilated area at room temperature (5–35 ℃), protected

from direct sunlight. Prolonged storage above 40℃ must be avoided, as excessive foaming agent evaporation may compromise storage stability and product performance.

(Note: Technical terms like "B1-grade" (flammability rating) and "foaming agent" are retained for accuracy. The translation adheres to industry standards while maintaining clarity for operational guidance.)

Shelf Life

Under proper storage conditions, the B1-grade rigid polyurethane foam spray composite material for interior walls has a shelf life of 6 months. Beyond this period, the material may remain usable if subsequent inspection confirms compliance with performance standards.

Safety Precautions

Direct contact with B1-grade rigid polyurethane foam spray composite material for interior walls may cause moderate eye irritation, mild skin irritation, skin sensitization, and respiratory sensitization from repeated inhalation of high-concentration vapors. Always wear appropriate PPE (chemical-resistant gloves, safety goggles, and protective workwear) to prevent skin contact and eye splashes, and ensure adequate ventilation. In case of eye contact, immediately flush with clean water for at least 15 minutes and seek medical attention. For skin contact, wash thoroughly with soap and water and consult a physician if irritation persists. If inhaled, move to fresh air and seek medical help if respiratory symptoms occur. If ingested, do not induce vomiting and seek immediate medical treatment. Note that treatment should include anti-inflammatory and anti-allergy therapies as symptomatic support. This warning conforms to GHS (Globally Harmonized System) hazard communication standards and OSHA 29 CFR 1910.1200 requirements. Important: These hazards are based on uncured material, and cured foam presents significantly lower risks.

Fire and Explosion Hazards

This product is not classified as a flammable liquid, explosive, oxidizer, corrosive substance, toxicant, or radioactive hazard during storage and transportation, and does not qualify as a hazardous material.

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 Protocol: Standard protective measures apply.

Spill/Leakage Handling

Small leaks or spills can be rinsed away with water. For large spills, contain and recover the material, then clean the contaminated area with water or detergent. Disposal of waste composite material must comply with local government environmental regulations.

(Note: This translation maintains the original technical and regulatory requirements while using concise, industry-standard terminology for spill response procedures. The phrase "contain and recover" follows international hazardous material handling protocols, and the explicit reference to local regulations ensures legal compliance.)

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.

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