

Product technical specification

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TDS Number:

Product name: B1 Grade Polyurethane Rigid Foam Spray Combination Material for Cold Storage

Version: V 3.2

Product Introduction

The B1 Grade Polyurethane Rigid Foam Spray Combination Material for cold storage utilizes an ultra-low thermal conductivity eco-friendly blowing agent. When used in conjunction with WANNATE[®] 2208, it can be applied on surfaces such as concrete, brick, wood, and other substrates, offering strong adhesion. The product exhibits excellent dimensional stability and superior flame retardant properties, achieving a B1 grade in combustion performance (GB8624-2012).

product Usage

Products are used in cold storage and building insulation and other working temperature in -25°C above various spraying fields. B1 Grade Polyurethane Rigid Foam Spray Combination Material for Cold Storage is a rapid curing system, suitable for most of the requirements of the spraying insulation field. Before using the B1 Grade Polyurethane Rigid Foam Spray Combination Material for Cold Storage, the test must be done to ensure the reliability of the composite system in this specific project.

Physical and Chemical Properties

| project | metric |
|---------------------------|------------------------|
| Viscosity of 25 °C, mPas | 50-200 |
| Density,g/cm ³ | 1.10±0.10 |
| Pigment | Light yellow or yellow |

Free Foaming Parameters

| Project | Metric |
|--------------------|--------|
| Milk white time, s | 2-3 |

| | |
|---|-------|
| Gel time, s | 9-10 |
| Debonding time, s | 10-13 |
| Free foaming density, and Kg/m ³ | 32-45 |

Physical Property

| Project | Metric |
|---|--------|
| Mechanism of foam density, kg/m ³ | ≥45 |
| Thermal conductivity, W / (m ·k) | ≤0.024 |
| Compression performance (deformation of 10%), kPa | ≥200 |
| Size stability (70°C, 48h),% | ≤1.5 |
| Tensile bond strength (with cement mortar, room Temperature), Mpa | ≥0.10 |
| Water absorption, % | ≤3 |

(1) B1 grade polyurethane foam for cold storage spraying foam requirements

material temperature: 25°C, material volume ratio 1:1, manual electric mixing (2500r / min) mixing.

(2) According to the matters needing attention used in this paper, the overall density of foam products obtained by the high-pressure spraying machine is greater than 45 kg/m³.

(3) The values provided in this paper are typical test values, and the specific data may be slightly different due to environmental conditions. The data listed are not legally binding for our products.

Usage Precautions

The construction equipment used in B1 grade polyurethane foam hard spraying material for cold storage is high pressure spraying machine. Before construction, please check and correct the conveying ratio of high pressure spraying machine and mixing pressure.

The temperature of the spraying operation environment should be 10~40°C, the wind speed should not be more than 5 m/s (force 3 wind), the relative humidity should be <75%, and the construction should not be allowed in rainy days. When the ambient temperature is lower than 10°C during construction, reliable technical measures should be taken to ensure the spraying quality.

In the spraying operation, control the temperature of black and white material

injection gun > 30°C to ensure the dry and clean substrate. Control the foam thickness of each gun in the range of 1-3cm (excluding the bottom layer). During the construction, the last layer of sprayed polyurethane hard foam surface is not stick, to spray the next layer. Other relevant standards shall be implemented according to the national standards. If the above conditions are not met, all responsibilities shall be borne by the buyer.

The spraying operation is based on GB 50404-2017 Technical Code for Hard foam Polyurethane Insulation and Waterproof Engineering.

The construction site shall be a fire-free area, well ventilated, and shall be far away from the fire source. Smoking is strictly prohibited. When there is a fire operation nearby, the fire approval system must be strictly implemented, and corresponding safety measures and special monitoring must be taken.

Before the formal construction of the project, the Buyer must do the test in the environment consistent with the construction conditions to ensure the reliability of the combined material system in this specific project. During the formal construction, the Buyer shall be deemed to have accepted the performance inspection of the product. If not as described above, all responsibilities shall be borne by the Buyer.

Packing Details

200L green tin bucket.

Storage (Usage) Precautions

The combination shall be stored in closed containers to avoid absorption of water vapor. Therefore, during the storage and transportation process, the container must be kept dry and sealed.

The B1 Grade Polyurethane Rigid Foam Spray Combination Material for Cold Storage material should be stored at room temperature between 5~35°C and in a ventilated and cool place, so as to avoid direct sunlight or long-term storage above 40°C, so as to avoid large volatilization of foaming agent and affect the storage and the performance of the product.

Expiration Date

Under suitable storage conditions, the storage period of the B1 grade polyurethane hard foam coating material in the cold storage system is 3 months. After 3 months, it can be used after passing the test.

Safety Precautions

Direct contact with the cold storage with B1 grade polyurethane hydrofoam spray combination can cause moderate eye irritation and mild skin irritation, which can cause skin allergy. Repeated inhalation of high concentrations of vapor can cause respiratory allergies. Medical treatment should be sought immediately, and anti-inflammatory and anti-allergic symptomatic treatment measures should be taken.

Care should be taken during the operation, to prevent its direct contact with the skin and splash into the eyes, please wear the necessary protective equipment (gloves, protective goggles, work clothes, etc.).

Once splashed on the skin or in the eyes, rinse with water for at least 15 minutes. Wash the skin with soapy water, and seek medical advice if necessary. Take it by mistake, please seek medical treatment immediately.

Fire and Explosion Hazards

This product does not belong to flammable liquid, explosives, oxidants, corrosive products, toxic products and radioactive dangerous goods in storage and transportation, and is not classified as dangerous goods.

Fire extinguishing medium: you can use carbon dioxide, foam, or chemical dry powder fire extinguishers. When there is no other fire extinguishing agent, a large amount of foggy water can be sprayed. Once the fire is extinguished, the spilled material should be cleaned up (see leakage spill treatment).

Rescue procedure: normal protection

Spill and Leakage Handling

A small amount of leakage, sprinkling materials can be washed away with water. If a large amount of leakage, shelter and recycling, pollute the ground with water or detergent washing. The disposal of waste combinations must be implemented in

accordance with the environmental protection regulations of the local government.

**For more information, please refer to the safety technical manual for 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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