

Product Name

产品名称

SMT- B321 Aerogel Thermal Insulation Coating (Intermediate Coating)

SMT -B321 气凝胶保温隔热涂料（中涂）

Description

描述

- SMT-B321 Aerogel Thermal Insulation (Intermediate Coating) is an aerogel thermal insulation coating prepared through a special synthesis process, using selected SiO₂ aerogel powder and silica microspheres. By employing microspheres of different diameters to fill each other's gaps, it achieves thermal insulation effects. It forms a dense insulation layer on the surface of the coated object, effectively blocking solar heat radiation and external noise from entering the room, as well as the conduction of heat radiation in the air, thereby reducing the internal and external heat exchange of the coated object.

This product is indicated for:

- Interior and exterior building walls
- Suitable for various types of roofs
- Other scenarios requiring thermal insulation
- SMT-B321气凝胶保温隔热(中涂)是以优选SiO₂ 气凝胶粉体和硅微球体，采用不同直径的微球相互填充来达到保温隔热效果。经特殊合成工艺制备而成的气凝胶保温隔热涂料。在被涂物表面形成一层致密的保温层，可有效阻隔太阳光热辐射和外部噪声进入房间及空气中热辐射的传导，减少被涂物的内部和外部的热量交换。

本品适用于：

- 建筑内外墙
- 适用于各类屋面
- 其他需要隔热保温的场景

Properties

产品特点

- Low thermal conductivity
 - Anti-condensation
 - Easy to construct
 - Good water resistance
 - Complies with environmental protection requirements and does not contain APEO
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- 低导热系数
 - 防结露
 - 易施工
 - 良好的耐水性
 - 符合环保要求，不含 APEO

Applications

产品应用

Before application:

- Compatibility tests between the coating and adjacent materials, as well as adhesion tests to the substrate to be bonded, shall be conducted prior to construction.

Construction Method:

- After opening the can, mix thoroughly. Add up to 2.5% of clean water by volume based on application preferences and paint consistency. Use an electric mixer to stir from top to bottom for 3 minutes until the paint reaches a creamy consistency. Apply the paint by brushing, rolling, or spraying as needed. Apply multiple thin layers (1 mm each time), wait approximately 8–24 hours for complete curing, then proceed with the next coat. The recommended coating thickness is 2mm.

施工前:

- 施工前应进行涂料与所接触材料的相容性试验和与待粘结基材的粘结性试验。

施工方法:

- 开桶后需要充分搅拌均匀，根据施工喜好及涂料状态可适量添加不超过总体积2.5%的清水，使用电动搅拌器从上到下搅拌3min，直至涂料成奶油状后，根据施工情况进行披刮、滚涂或者喷涂。建议薄涂多次施工，一次施工1mm，等待约8-24h后，待涂料彻底固化，再进行下一遍施工。推荐涂层厚度为2mm。

Storage

存储要求

This product is non-hazardous. Store in cool and dry place below 5-30°C. Shelf life: 12 months. Use as soon as possible.

本产品属于非危险品，储存于温度在5--30℃的阴凉干燥处，有效期为12个月，建议尽早使用。

Note

注意事项

- Use the product within shelf life; expired goods are prohibited.
- Construct strictly in accordance with adhesion test procedures.
- Avoid direct contact with skin and eyes. Do not ingest.
- Keep away from children and store out of their reach.
- The ambient temperature should be between 5–35°C, with air humidity below 85%. Outdoor construction must be halted during heavy fog or strong winds (>Grade 5), as well as on rainy or windy days. During paint curing periods, avoid exposure to rain and intense direct ultraviolet radiation.
- When using the spray application method, ensure that the spray gun pressure is not set too high.
- 应在产品保质期内使用，过期产品不得使用。
- 应严格按照粘结性试验的流程施工。
- 避免皮肤和眼睛直接接触，请勿吞食。
- 避免小孩接触。请放置于儿童接触不到的地方。
- 环境温度需要5-35℃之间，空气湿度 < 85%，且在大雾大风（> 5级）、风雨天停止户外施工、涂料养护期间避免淋雨及强紫外直晒。
- 当使用喷涂的施工方式，注意调节喷枪压力不宜过高。

Shelf life & Instruction

使用寿命和说明

Shelf life: 12 months

保质期：12 个月

These instructions are only recommendations, which are based on our experience. We advise preliminary testing before use.

这些说明只是基于我们的经验的建议。我们建议在使用前进行初步测试。

Packaging Specification

包装规格

This product is typically packaged in 20L plastic pails. Custom packaging is also available upon customer request.

本产品通常采用 20L 塑料桶包装。也可根据客户的需要定制包装。

Technical Data Sheet (Condition: 23°C, 55%RH)

技术参数表 (条件: 23°C, 55%RH)

Test Item	Technical Requirement	Typical data	Test Method
Appearance of the film coating	Normal	Normal	Visual inspection
Thermal conductivity (25°C), W/(m·K)	0.035±0.002	0.035	GB/T 10294
Moisture density, kg/m ³	≤500	460	GB/T 6750
Dry density, kg/m ³	≤200	180±2	GB/T 6750
Operating Temperature, °C	—	-35~120	Company Standards
Bonding strength, MPa	≥0.6	0.8	JG/T 157-2009
Initial drying and crack resistance	No cracks in 3 hours	No cracks in 3 hours	JG/T 157-2009
Temperature-resistant coating modification	No abnormalities	No abnormalities	T/CECS 10126-2021
Flexibility	100 mm, no cracks	100 mm, no cracks	JG/T 157-2009
Resistivity against water	No abnormalities in 96 hours	No abnormalities in 96 hours	T/CECS 10126-2021
Resistance to alkali	No abnormalities in 48 hours	No abnormalities in 48 hours	T/CECS 10126-2021
VOC, g/L	≤50	Not detected	GB/T 33376
Direct sunlight reflection ratio, %	≥86	89	T/CBMF 190-2022
Application rate, kg/(m ² ·mm)	0.45-0.55	0.5	Company Standards

检测项目	技术指标	典型数据	检测标准
漆膜外观	正常	正常	目测
导热系数 (25°C), W/(m·K)	0.035±0.002	0.035	GB/T 10294
湿密度, kg/m ³	≤500	460	GB/T 6750
干密度, kg/m ³	≤200	180±2	GB/T 6750
使用温度, °C	—	-35~120	企标
粘接强度, MPa	≥0.6	0.8	JG/T 157-2009
初期干燥抗裂性	3h无裂纹	3h无裂纹	JG/T 157-2009
涂层耐温变性	无异常	无异常	T/CECS 10126-2021
柔韧性	100mm, 无裂纹	100mm, 无裂纹	JG/T 157-2009
耐水性	96h无异常	96h无异常	T/CECS 10126-2021
耐碱性	48h无异常	48h无异常	T/CECS 10126-2021

VOC含量, g/L	≤50	未检出	GB/T 33376
太阳光直接反射比, %	≥86	89	T/CBMF 190-2022
涂布量, kg/m ² *mm	0.45-0.55	0.5	企标