

Product Name

产品名称

SMT-M405 Silane-Modified Wind Power Sealant

SMT-M405 硅烷改性风电胶

Description

描述

SMT-M405 Silane-Modified Wind Turbine Adhesive is an elastic adhesive formulated with specially copolymer-modified silicone rubber resin as the base material, compounded with other active auxiliary agents. After extrusion, the adhesive paste contacts air and undergoes a moisture-triggered vulcanization reaction. It cures gradually from the surface inward to form an elastomer for bonding and sealing functions. The fully cured adhesive is tough and highly elastic, featuring outstanding mechanical properties including tensile performance, shear strength, adhesion and UV aging resistance.

This product is indicated for:

- Static and dynamic sealing for wind turbine parts exposed to wind, water, salt spray, dust and oil ingress.
- Other bonding and sealing applications in industrial fields compatible with this product.

SMT-M405硅烷改性风电胶是基于特殊共聚改性有机硅橡胶树脂主体成分加其他活性助剂制备而成的弹性胶粘剂。胶浆挤出接触空气后与空气中的水分会发生硫化反应，由表及里逐步固化成弹性体而发挥作用，固化后胶体坚韧而富有弹性，具有优异的力学性能，如拉伸性能、剪切强度以及粘接性、耐紫外老化性能。

本品适用于：

- 风电机组可能进风、进水、进盐雾、进尘、进油的动静密封。
- 工业领域中其他适宜本产品的粘接与密封用途

Properties

产品特点

- Environmentally friendly, non-toxic, ultra-low VOC, odorless; causes no contamination or corrosion to substrates.
 - Paintable surface: Coatings can be sprayed for color finishing once tack-free.
 - Excellent workability: Single-component formula for easy application. It delivers good extrudability within 5°C ~40°C and can be directly applied via a caulking gun.
 - Superior adhesion: Bonds excellently with metals, ceramics, wood, PVC, PC, PA and other materials without primer.
 - Outstanding weather resistance and anti-aging performance.
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- 环保无毒、超低 VOC，无毒无味，对基材无污染、无腐蚀
 - 表面可涂饰：表干后表面可喷涂涂料上色
 - 良好的操作性：单组分，操作方便，在 5°C~40°C 的温度范围内具有良好的可挤出性，用胶枪挤出直接施工即可
 - 优异的粘接性：与金属、陶瓷、木材及 PVC、PC、PA 等材料具有优异的粘接性，无须使用底涂
 - 优异的耐候、耐老化性能

Applications

产品应用

Before application:

- Prior to application, compatibility tests between the sealant and contacting materials as well as adhesion tests on the substrates to be bonded shall be carried out.

Construction Method:

- All application surfaces must be clean, dry and free of contaminants.
- Fit the cartridge into a suitable caulking gun. Cut the nozzle according to joint width, then extrude sealant into the joint to ensure full contact between sealant and joint edges.
- Compact the sealant with a proper tool and scrape off excess material.

施工前:

- 施工前应进行密封胶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:

- 施工表面必须清洁、干燥、无污垢。
- 将胶管装在合适的胶枪上，根据接缝宽度切割胶嘴，将胶挤入接缝中，确保胶与接缝的边完全接触。
- 用合适的工具压实密封胶，并刮除多余的胶。

Storage

存储要求

This product is non-hazardous. Store in cool and dry place below 10-27°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10-27°C的阴凉干燥处，有效期为12个月，建议尽早使用。

Note

注意事项

- Not suitable for working environments with long-term service temperature above 100°C.
 - Do not use in fully enclosed and poorly ventilated areas, as this sealant cures by absorbing moisture from ambient air.
 - Not applicable for areas with continuous water immersion or year-round humid conditions.
 - Not recommended for bonding polypropylene (PP), polyethylene (PE) and polytetrafluoroethylene (PTFE).
 - Unsuitable for substrates that bleed grease, plasticizers or solvents, such as surfaces of oil-impregnated timber.
 - The substrate surface for construction must be clean, dry and free of dirt and impurities.
 - Use the product within its shelf life; expired sealant is prohibited from use.
 - Construction operations shall be carried out strictly in accordance with the adhesion compatibility test procedure.
 - Avoid direct contact with skin and eyes; do not ingest.
 - Keep out of reach of children and store in a place inaccessible to minors.
 - Trace chemical substances will be released during curing. Sufficient ventilation must be maintained at the construction site. The fully cured product is non-toxic to human bodies.
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- 不宜用于使用温度长期高于100°C的场所。
 - 不宜用于密不通风的场所，因为密封胶需吸收空气中的水分固化。
 - 不宜用于连续浸水或终年潮湿的地方。
 - 不宜用于聚丙烯(PP)、聚乙烯(PE)、聚四氟乙烯(PTFE)的粘接。
 - 不宜用于会渗出油脂、增塑剂或溶剂的材料，如浸油木材的表面。
 - 施工表面必须保持清洁、干燥、无污垢。
 - 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。
 - 产品在固化过程中会释放出微量化学物质，作业场所应保持充分的通风，固化后对人体无毒。

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 available in standard 300ml rigid cartridges, 24 pieces per carton, and 600ml foil sachets, 20 pieces per carton. Custom filling is available upon customer request.

本产品采用标准的300ML胶料胶瓶包装，24支/箱；600ML软支包装，20支/箱。也可根据客户要求灌装。

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

技术参数表（条件：23°C, 55%RH）

Test Items		Technical requirements	Typical Data	Test Method
Appearance		Smooth and uniform paste, free of bubbles, skinning and gel lumps	Smooth and uniform paste, free of bubbles, skinning and gel lumps	Visual inspection
Density, g/cm ³		1.53±0.03	1.53	GB/T 13477.2-2018
Sag Resistance	vertical, mm	≤3	0	GB/T 13477.6
	horizontal	No deformation	No deformation	
Tack-free time, min		10-20	20	GB/T 13477.5
Cure rate, mm/24h		≥2.5	3	GB/T 13477.22
Tensile Strength, MPa		≥2.0	2.4	GB/T 528-2009
Elongation at Break, %		≥300	330	
Hardness, Shore A		50-60	55	GB/T 39693.4-2025

检测项目		技术指标	典型数据	检测标准
外观		细腻、均匀膏状物，不应有气泡、结皮或凝胶	细腻、均匀膏状物，不应有气泡、结皮或凝胶	目测
密度, g/cm ³		1.53±0.03	1.53	GB/T 13477.2-2018
下垂度	垂直, mm	≤3	0	GB/T 13477.6
	水平	无变形	无变形	
表干时间, min		10-20	20	GB/T 13477.5
固化速度, mm/24h		≥2.5	3	GB/T 13477.22
拉伸强度, MPa		≥2.0	2.4	GB/T 528-2009
断裂伸长率, %		≥300	330	

硬度, Shore A	50-60	55	GB/T 39693.4-2025
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