

Product Name

产品名称

SMT-111 Structural Silicone Sealant for Building Curtain Wall

SMT-111 幕墙硅酮结构胶

Description

描述

SMT-111 is a neutral oxime-curing structural silicone sealant featuring excellent elasticity and movement accommodation capacity. It delivers outstanding adhesion to various powder-coated metals. Thanks to its thixotropic property, the product exhibits no sagging during construction joint filling, making it especially suitable for structural bonding and assembly of all types of curtain walls. In addition, SMT-111 boasts excellent adhesion and compatibility with most substrate surfaces. It offers superior resistance to aging, ultraviolet radiation and extreme high and low temperature fluctuations, and can be widely used in various bonding and sealing scenarios.

This product is indicated for:

- Structural bonding and assembly of all types of curtain walls
- Structural bonding and sealing of insulating glass units
- Bonding and sealing of various coated metal profiles
- Glass, coated glass, ceramic tiles, stone and concrete

SMT-111属于中性脱肟型硅酮结构胶，具有较好的弹性及位移变形能力；对各种粉涂层金属具有良好的粘接能力，产品的触变性使其在建筑填缝应用时不会产生流挂现象，因而特别适用于各种幕墙的结构性粘合装配应用，同时SMT-111对大多数基材表面具有很好的粘接性和相容性，抗老化、抗紫外线辐射以及耐极端的高低温变化，能广泛的应用于粘接及密封应用场合。

本品适用于：

- 各类幕墙的结构性粘合装配应用
- 中空玻璃的结构性粘接密封
- 各种喷涂金属型材的粘接及密封应用
- 玻璃、镀膜玻璃、瓷砖及砖石混凝土等

Properties

产品特点

- One-component, neutral oxime-curing system; non-corrosive to metals and coated glass
- Outstanding weathering resistance, with excellent resistance to heat, UV radiation, ozone and water
- Superior high and low temperature resistance. After curing, it remains free from brittleness, hardening and cracking at -50°C, and will not soften or degrade at 150°C, retaining reliable strength and elasticity
- Excellent adhesion to most building substrates
- Good compatibility with other neutral silicone sealants
- 脱酮肟型、单组分、中性固化，对金属、镀膜玻璃无腐蚀
- 优异的耐气候老化性能，耐热、耐紫外线、耐臭氧、耐水
- 耐高低温性能卓越，固化后在-50°C不变脆、硬化或开裂，在 150°C不变软、降解，保持良好的强度和弹性
- 对大部分建筑材料具有优良的粘接性
- 与其他中性硅酮胶具有良好的相容性

Applications

产品应用

Before application:

- Compatibility test between structural silicone sealant and contacting materials as well as adhesion test on substrates to be bonded shall be conducted prior to construction.

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:

- 施工前应进行结构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 recommended for joint sealing with movement exceeding $\pm 30\%$.
 - Not to be used as structural sealant.
 - Not suitable for copper and polycarbonate substrates.
 - Application is not recommended when substrate surface temperature is below 5°C or above 40°C .
 - Not suitable for frosted, damp areas or locations with continuous water immersion.
 - Avoid contact with rubber materials (e.g. rubber gaskets, rubber spacers) to prevent yellowing.
 - Avoid contact with acidic or alkaline substances (e.g. external wall cleaning agents) to prevent discoloration.
 - Not suitable for materials that exude oil, plasticizer or solvent, such as oil-impregnated wood surfaces.
 - Use within the product shelf life; expired products are prohibited from use.
 - Construction shall be carried out strictly in accordance with the procedures specified in adhesion tests.
 - Avoid direct contact with skin and eyes; do not ingest.
 - Keep out of reach of children.
 - Not suitable for fully enclosed unventilated spaces, as the sealant cures by absorbing moisture from ambient air.
 - The product releases trace amounts of chemicals during curing. Adequate ventilation must be maintained at the work area. It is non-toxic to human body after complete curing.
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- 不建议位移超过 $\pm 30\%$ 的接口密封。
 - 不能作为结构密封胶使用。
 - 不宜用于铜及聚碳酸酯材料。
 - 材料表面温度低于 5°C 或超过 40°C 时，不宜施工。
 - 不宜用于结霜、潮湿或连续浸水的地方。
 - 应避免与橡胶类材料接触（如胶条、橡胶垫块等），以免发生黄变。
 - 应避免与酸性或碱性物质接触（如外墙清洗液），以免发生变色。
 - 不宜用于所有会渗出油脂、增塑剂或溶剂的材料，如浸油木材的表面。
 - 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。
 - 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。
 - 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 590ml soft sausage packs (20 pieces per carton). Custom filling specifications can be provided upon customer request.

本产品采用标准的 300ML 胶料胶瓶包装，24 支/箱；590ML 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		Fine and homogeneous paste, free of bubbles, skinning or gel lumps	Fine and homogeneous paste, free of bubbles, skinning or gel lumps	JC/T 485-2007
Density, g/cm ³		1.35±0.03	1.37	GB/T 13477.2-2018
Sag Resistance	vertical, mm	≤3	0	GB/T 13477.6-2002
	horizontal	No deformation	No deformation	
Extrudability, g/5s		>10 (Nozzle tip diameter: ϕ 3.2 mm, operating pressure: 0.4 MPa)	27	GB/T 13477.4
Tack-free time, min		15-30	25	GB/T 13477.5-2002
Hardness, Shore A		20-60	46	GB/T 39693.4-2025
Tensile Adhesion	23°C	Tensile Adhesion Property, MPa	≥0.6	GB 16776-2025 6.11
		Elongation at maximum tensile strength, %	≥100	
		Area of Adhesive Failure, %	≤5	
	90	Tensile Adhesion Property, MPa	≥0.45	
		Area of Adhesive Failure, %	≤5	
	-30	Tensile Adhesion Property, MPa	≥0.45	
			1.76	

		Area of Adhesive Failure, %	≤5	0	
	Exposure to Water and Ultraviolet Irradiation	Tensile Adhesion Property, MPa	≥0.45	1.05	
		Area of Adhesive Failure, %	≤10	0	
Shear Property	Shear Strength, MPa		≥0.60	1.2	GB 16776-2025 6.12
	Area of Adhesive Failure, %		≤5	0	
Thermal Aging	Thermogravimetry, %		≤6	4.4	GB 16776-2025 6.13
	Crazing		No	No	
	Chalking		No	No	
Alkane Plasticizer			Not detectable	Not detectable	GB/T 31851-2015

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	JC/T 485-2007
密度, g/cm ³		1.35±0.03	1.37	GB/T 13477.2-2018
下垂度	垂直, mm	≤3	0	GB/T 13477.6-2002
	水平	无变形	无变形	
挤出性, g/5s		>10 (尖嘴φ3.2mm, 压力0.4MPa)	27	GB/T 13477.4
表干时间, min		15-30	25	GB/T 13477.5-2002
硬度, Shore A		20-60	46	GB/T 39693.4-2025
拉伸粘结性	23℃	拉伸粘结强度, MPa	≥0.6	GB 16776-2025 6.11
		最大拉伸强度	≥100	

		时伸长率， %			
		粘结破坏面积， %	≤5	1	
	90	拉伸粘结强度， MPa	≥0.45	0.91	
		粘结破坏面积， %	≤5	0	
	-30	拉伸粘结强度， MPa	≥0.45	1.76	
		粘结破坏面积， %	≤5	0	
	水-紫外线光照	拉伸粘结强度， MPa	≥0.45	1.05	
		粘结破坏面积， %	≤10	0	
剪切性能	剪切强度， MPa	≥0.60	1.2	GB 16776-2025 6.12	
	粘结破坏面积， %	≤5	0		
热老化	热失重， %	≤6	4.4	GB 16776-2025 6.13	
	龟裂	无	无		
	粉化	无	无		
烷烃增塑剂		不应检出	未检出	GB/T 31851-2015	