

Product Name

产品名称

SMT-666A Special Sealant for Solar Photovoltaic Modules

SMT -666A 太阳能光伏组件专用密封胶

Description

描述

SMT-666A is a one-component thixotropic paste oxime-cure silicone adhesive sealant with excellent mechanical properties, universal adhesion to various substrates and outstanding weather aging resistance. It is mainly applied for bonding and sealing PV backsheets, glass, frames and junction boxes of photovoltaic modules, and has obtained UL94 V-0 and TUV certifications. For application, extrude the sealant from the cartridge into target joints via a caulking gun. At room temperature, the product absorbs atmospheric moisture and cures progressively from the surface inward to form an elastomer, delivering reliable sealing performance.

This product is indicated for:

- Bonding and sealing of aluminum frames and junction boxes to PTFE for solar photovoltaic modules, featuring moisture-proof, insulating and weather-resistant properties.
- Bonding and fixing of rear metal brackets and glass for thin-film solar cells.

SMT-666A 单组份触变性膏状脱肟型有机硅粘接密封胶，机械性能优异，广泛的材料粘接适用性，耐气候老化。主要用于光伏组件背膜、玻璃、边框和接线盒的粘接密封。通过了UL94V-0和TUV标志认证。使用时用胶枪将胶从密封胶筒中挤到需要密封的接缝中，密封胶在室温下吸收空气中的水分，由表及里逐渐固化，固化成弹性体，形成有效密封。

本品适用于：

- 太阳能光伏组件铝框粘接密封，接线盒与PTPE粘接密封，具有防潮、绝缘、耐候的作用
- 薄膜太阳能电池背面金属支架与玻璃粘接固定

Properties

产品特点

- Easy to operate and fast curing speed
 - Excellent compatibility with various EVA materials
 - Good deformation resistance
 - Wide high & low temperature resistance; service temperature range: -40~200°C
 - Waterproof, weather-resistant and anti-yellowing under UV radiation. Passed 85°C / 85% RH damp heat aging test with excellent high temperature & high humidity resistance
 - UL certified; equipped with relevant SGS and TUV test reports; compliant with EU RoHS Directive
 - Ketoxime cure, high modulus, neutral curing formula, non-corrosive to most construction substrates
 - Outstanding thermal cycling performance: no brittleness, hardening or cracking at -50°C after full curing; no softening or degradation at 150°C, retaining stable strength and elasticity
 - One-component for convenient use; favorable extrudability and thixotropy within 5°C~40°C
 - Superior adhesion to aluminum panels, various stone materials and most construction substrates
 - Good compatibility with other neutral silicone sealants
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- 易操作、固化速度快
 - 与各类 EVA 良好相容
 - 良好耐变形能力
 - 耐高低温、工作温度-40~200°C
 - 防水、耐候和抗紫外黄变性能，经受 85°C、85%RH 老化实验，耐高温高湿
 - 通过 UL 认证、有 SGS、TUV 相关的测试报告、符合欧盟 ROHS 指令要求
 - 脱酮肟型、高模量、中性固化，对大多数建筑材料无腐蚀
 - 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
 - 单组分、使用方便，在 5°C-40°C具有良好的挤出性和触变性
 - 对铝板、各类石材及大部分建筑材具有优良的粘接性
 - 与其他中性硅酮胶具有良好的相容性

Applications

产品应用

Before application:

- 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 to be used as structural sealant.
 - Not suitable for copper and polycarbonate substrates.
 - Do not apply when the substrate surface temperature is lower than 5°C or higher than 40°C.
 - Not applicable for frosted, damp areas or locations under continuous water immersion.
 - Avoid contact with rubber materials such as rubber gaskets and rubber spacers to prevent yellowing.
 - Avoid contact with acidic or alkaline substances (e.g. exterior wall cleaning agents) to discoloration.
 - Unsuitable for substrates that exude grease, plasticizers or solvents, such as surfaces of oil-impregnated wood.
 - Use the product within its shelf life; expired sealant is forbidden for use.
 - Construction 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 an inaccessible place for 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℃或超过40℃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。
 - 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 normally available in black and white; custom colors can be produced according to customer samples. Standard packages include 300 mL rigid cartridges and 400 mL sausage packs; other capacities can be customized upon customer request.

本产品常规黑色、白色，也可根据客户来样定制颜色。包装为标准的300ML胶料胶瓶；400ML软支包装，或可根据客户需求定制其他容量。

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	1.50±0.03	1.52	GB/T 13477.6
Tack-free time, min	≤30	10	GB/T 13477.5
Extrudability, g/5s	20-250	120	GB/T 13477.4
Cure rate, mm/24h	≥2.0	2.5	GB/T 13477.22
Shear Strength Between Frame Aluminum Profiles, Mpa	≥1.0	1.5	GB/T 7124
Tensile Strength, Mpa	≥1.5	2.7	GB/T 528-2009
Hardness, Shore A	30-40	52	GB/T 39693.4-2025
Flame Retardant Grade	V0	V0	GB/T 2408
Volume Resistivity, Ω.cm	≥1X10 ¹⁴	1.875X10 ¹⁴	GB/T 1692

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, 无气泡、结块、凝胶、结皮, 无不易分散的析出物	细腻, 均匀膏状物, 无气泡、结块、凝胶、结皮, 无不易分散的析出物	目测
密度, g/cm ³	1.50±0.03	1.52	GB/T 13477.6
表干时间, min	≤30	10	GB/T 13477.5
挤出性, g/min	20-250	120	GB/T 13477.4
固化速度, mm/24h	≥2.0	2.5	GB/T 13477.22
边框铝材间剪切强度, Mpa	≥1.0	1.5	GB/T 7124
拉伸强度, Mpa	≥1.5	2.7	GB/T 528-2009
邵氏硬度, Shore A	30-40	52	GB/T 39693.4-2025

阻燃等级	V0	V0	GB/T 2408
体积电阻率, Ω.cm	≥1X10 ¹⁴	1.875X10 ¹⁴	GB/T 1692