



Features 特性

- Low Viscosity 低粘度
- Low Density 低密度
- Easy Handling 易操作
- High Reliability 高可靠性

Applications 产品应用

- Motor Potting 电机灌封
- Power Module 电源模块
- Charging Pile 充电桩
- ADAS 智能驾驶系统

Thermal TP0400 导热灌封胶是一种双组份加成型有机硅体系，具有导热率高，流动性好，优越的电气绝缘性能和阻燃性能。该产品适用于高功率电源及模块，电流/功率转换单元，高功率车载充电器及充电桩等高功率器件，可满足电气/电子封装领域对高导热性的要求，同时又能保持有机硅的理想特性。。

Thermal TP0400 thermally conductive potting compound is a two-component additional type silicone base with high thermal conductivity, good flowability, superior electrical insulation and flame retardancy. It's suitable for high-power devices such as high-power supplies and modules, current/power conversion units, high power on-board chargers and charging piles. The product can meet the requirements for high thermal conductivity in the electrical/electronic packaging field and maintaining silicone polymer characteristics.

Property 特性	Typical Value 典型值	Unit 单位	Test Method 测试方法
Composition 主要成分	Silicone Filled with Thermal Powder 硅胶&导热粉体		—
Color 颜色	A – Red 红色 B – White 白色 Mix – Red 红色		Visual 目视
Thermal Conductivity 导热系数	4.0	W/m·K	ASTM D5470
Viscosity 粘度 (A/B)	20000	mPa.s	ASTM D2196
Density 密度	3.1	g/cm ³	ASTM D792
Hardness 硬度 (Shore A)	30	—	ASTM D2240
Cure Time 固化时间	30min@80°C 24H@25°C	—	—
Working Time 操作时间	3	H	—
Temperature Range 耐温范围	-40 - 150	°C	—
Breakdown Voltage 击穿强度	> 6.0	KV/mm	ASTM D149
Flame Rating 阻燃等级	V-0	—	UL 94
RoHS Compliance 合规性	YES	—	—
Shelf Life 保存期	6	month	25±5°C, ≤50% RH

All technical information stated in this technical data have been confirmed that all the technical parameters are reliable after harsh testing and evaluation of the products. Before you use our products, please carefully evaluate and decide whether the product meets your requirement and you need to take all the risks and responsibilities to use.

此技术资料里所有陈述的技术信息，全部是基于本公司对自身产品在经过严格的测试评估后，证明各项技术参数指标是值得信赖的前提下编写的。在您使用我们公司产品之前，请充分评估该产品是否符合您的使用需求，您需要承担使用的全部风险和责任。

Instructions 使用方法

混胶：混合前，必须充分搅拌 AB 组分，并按 1:1 的比例（重量比或体积比）混合。生产用量大时，可使用自动计量/调胶/点胶设备。

如果不使用封闭腔式真空机械搅拌器，在混合物搅拌或催化反应时，灌封胶体系内会混入空气。最大限度减少空气泡和孔隙，有机硅灌封胶可发挥最佳的电气特性。

灌胶：使用自动计量/点胶设备涂覆有机硅灌封胶。避免在包含固化抑制物的表面上涂覆 **Thermal TP0400** 灌封胶，例如胺类、硫或锡盐。如果对粘合表面有疑问，先选一小块表面试涂 **Thermal TP0400** 灌封胶，然后在正常固化时间内固化，观察效果如何。

固化：灌封胶室温 25℃ 固化 24 小时，或 80℃ 下固化 30 分钟。应考虑烘箱自身的升温过程、蓄热能力较强部件或其他可能使材料延迟达到目标温度的情况而保留一定的时间余量。

Mixing - Before mixing, please fully mix Part A and B with the ratio of 1:1 (weight ratio or volume ratio). When the production volume is high, automatic metering/adjusting /dispensing equipment is preferred to use.

If a closed-cavity vacuum mechanical stirrer is not used, air will be involved into the potting compound system during mixing. The best electrical performance could be achieved by minimizing air bubbles and porosity in the silicone potting compound.

Potting - Use automatic dispensing equipment to apply silicone potting. Avoid applying **Thermal TP0400** on surfaces that contain inhibitors such as amines, sulfur, or tin compounds. If you're not sure about the bonding surface, please choose an area to dispense **Thermal TP0400** potting material first and then cure according to the standard curing procedure and test the results.

Curing - The potting material can be cured at room temperature (25°C) for 24 hours, or 80°C for 30 minutes. The heating efficiency, heat storage capabilities of the oven and other unexpected conditions may lead to longer time to achieve the target temperature, so slight buffer baking time should be considered.

Storage 储藏

在温度 25℃ 下，使用原装未开启容器储存，每种组分的保质期均为自制造之日起六个月。要达到最长保质期，储存时必须定期转动本品的包装容器。如果不搅拌，会出现沉降。

Thermal TP0400 灌封胶会释放微量氢气。不得重新包装或储存在无排气口的容器内。储存区域须充分通风，以防氢气的聚积。

Stored in the original unopened container at a temperature of 25°C, the shelf life of each component is six months from the date of manufacture. To achieve the longest shelf life, the packages should be rotated regularly during storing. If not so, sedimentation will occur.

Thermal TP0400 potting compound will release tiny amount of hydrogen. Do not repackage or store in containers without vents. The storage area must be fully ventilated to prevent accumulation of hydrogen.

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