

VK-XR530

Pre-Cured Thermal Conductive GEL



Product Description

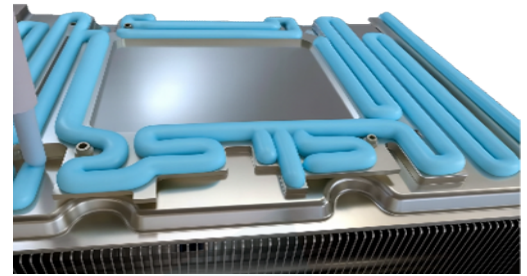
VK-XR530 is a pre-cured, single-component thermal gel designed for next-generation electronics requiring both high performance and material purity.

Unlike conventional silicone gels, it is formulated with a siloxane-free system (D3–D20 not detected), eliminating the risk of silicone volatilization or contamination in sensitive optical and communication modules.

With a thermal conductivity of 5.3 W/m-K, VK-XR530 delivers efficient heat dissipation while maintaining excellent thixotropic balance—it flows easily under pressure (~30 g/min) yet retains a strong internal network that prevents slumping, dripping, or pump-out even in vertical or wide-gap (> 3 mm) assemblies.

Its optimized structure achieves a bond-line thickness of ~60 µm, minimizing thermal resistance between components.

The material's high reliability, wide process window, and cost-effective formulation make it ideal for large-scale production and versatile integration across computing, networking, and automotive electronics.



PROPERTY	VK-XR530	TEST METHOD
Construction	Filled Silicone Dispensable	N/A
Color	Blue	Visual
Density	3.0 g/cc	ASTM D792
Flow Rate, 30cc Syringe	10cc/min or 30g/min	90 psi, no tip
Bulk Thermal Conductivity	5.3 W/m-K	ASTM D5470
Thermal Resistance		
10 psi & 60°C	0.22 °C-cm ² /W	ASTM D5470
50 psi & 60°C	0.15 °C-cm ² /W	
Constant gap of 0.1mm	0.28 °C-cm ² /W	
Constant gap of 1.0mm	1.80 °C-cm ² /W	
Operating Temperature Range	-40°C to 150°C	VOT Test Method
Minimum BLT	~60µm	VOT Test Method
Dielectric Constant	8 @1MHz	ASTM D150
Volume Resistivity	10 ¹³ Ω-cm	ASTM D257
Flammability Rating	V-0	UL 94

Typical Applications

- Power modules and automotive ECUs
- 5G communication and network devices
- smooth flow (~30 g/min) during dispensing, excellent shape retention after application
- CPUs, GPUs, and memory modules
- Optical modules and high-density packaging
- Consumer electronics and industrial control units

Storage Conditions

- Storage Temperature: 15°C to 35°C, RH <50%
- Shelf Life: 6 months under above conditions

Availability

- Cans
- Pails
- Syringes

FEATURES & BENEFITS

- Thermal Conductivity: 5.3 W/m-K
- Ready-to-use, no mixing required
- smooth flow (~30 g/min) during dispensing, excellent shape retention after application
- maintains form and gap-filling capability (> 3 mm) without sagging or dripping
- ~60 µm under typical assembly pressure
- resists pump-out, drying, and delamination under thermal cycling
- suitable for automated dispensing and reworkable assembly
- designed for mass-production environments requiring both performance and value

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