

2-part Thermal Conductive Gel

TFG-series 2.0 – 6.0 W/mK | Two-component Gel



Product Highlights

- 1:1 mix ratio
- Flowable and easy to handle
- Cures at room temperature or elevated temperatures
- Excellent insulation properties
- Low thermal resistance
- Simple to repair and rework
- RoHS compliant

Applications

- Automotive Electronic Control Units (ECUs)
- Power and semiconductor equipment
- Memory and power modules
- Microprocessors and graphics processors
- Flat-panel displays and consumer electronics

The TFG series is a soft, two-component thermally conductive gel with outstanding heat transfer capabilities. It can be cured at room or elevated temperatures, providing flexibility for different applications. Before curing, the gel exhibits excellent thixotropic properties for easy application, and once cured, it forms a soft, in-place thermal pad.

The TFG series is perfect for thermal management in low-pressure applications, especially when components share a common heat sink or enclosure with uneven heights, or when heat-generating parts are mounted on irregular surfaces. It efficiently dissipates heat while gently and elastically accommodating height variations, protecting sensitive components.

Because the material is stable before curing, it stays securely in place without flowing out of gaps. Once cured, it forms a low-modulus elastomer with excellent electrical insulation, water and moisture resistance, weather durability, and stability over a wide temperature range. These qualities make the TFG series highly effective for a variety of demanding thermal applications.

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Specifications Table

Parameters	Units of Measure	TFG2055		TFG1845LV		TFG2075		TFG2640		TFG3540		TFG4845		TFG6045	
Component		A	B	B	A	B	B	A	B	A	B	A	B	A	B
Colour		Yellow	White	White	Yellow	Pink	White	Green	White	White	Blue	White	Grey	White	Pink
Viscosity	cps	250000		120000		250000		270000		150000		350000		500000	
Viscosity after mixing	cps	250000		120000		250000		270000		150000		350000		500000	
Minimum Thickness	mm	0.05		0.08		0.05		0.06		0.05		0.05		0.1	
Operating time @25°C	min	60		60		60		60		60		60		60	
Curing Time@100°C	min	10		15		15		10		20		20		20	
Curing Time@25°C	h	5		6		4		6		6		8		12	
After Curing															
Hardness	Shore 00	55		45		75		40		40		45		45	
Thermal Conductivity	W/m·K	2		1.8		2		2.6		3.5		4.8		6	
Thermal Resistance @50psi	°C·in²/W	≤0.08		≤0.08		≤0.08		≤0.07		≤0.06		≤0.04		≤0.035	
Dielectric Strength	kV/mm	≥10		≥12		≥15		≥12		≥10		≥9		≥9	
Volume Resistivity	Ω·cm	≥1.0×10 ¹³		≥1.0×10 ¹³		≥1.0×10 ¹³		≥1.0×10 ³		≥1.0×10 ¹²		≥1.0×10 ¹²		≥1.0×10 ¹²	
Density	g/cm³	2.6		2.45		2.9		2.93		3		3.1		3.3	
Dielectric Constant	@1MHz	6.5		6.5		6.8		6.5		7		8.5		7.5	
CTE (Coefficient of thermal expansion)	ppm/°C	170		175		170		160		150		150		135	
Low Volatile Content (D4 – D20)	PPM	≤100		≤100		≤100		≤100		≤50		≤30		≤30	
Flammability Rating	UL94	V0		V0		V0		V0		V0		V0		V0	
Operating Temperature	°C	-60~+200		-60~+200		-60~+200		-60~+200		-60~+200		-60~+200		-60~+150	
RoHS		Yes		Yes		Yes		Yes		Yes		Yes		Yes	