

LED Thermal Management

Advanced silicone technology for LED applications

Dow Corning is a global technology innovator for the LED marketplace, delivering high-performance solutions developed to meet the unique demands of LED assembly, from general illumination to specific automotive applications.

We deliver a comprehensive line of wet dispensed and fabricated thermal management material.

Features

- Excellent thermal transfer
- Good thermal and aging stability
- Flexible, stress relieving
- Outstanding gap fill

Benefits

- Easy application (heat cured or screen printing)
- Pre-cured materials can be cold applied
- Good dielectric properties
- Available in various forms: adhesive, gels, grease, thermal pad

Thermal Interface Materials – Wet Dispensed: Dispensable, printable and curable materials effective as heat transfer media.

Product Family	Material	Description/Color	Cure Conditions		Thermal Conductivity at 25°C (77°F), Watt/meter-K	Viscosity (cP)
			Room Temperature Cure, Time	Heat Cure, Time		
Adhesive/Sealant	Dow Corning® SE 4486 CV Thermally Conductive Adhesive	Flowable; one-part moisture cure; white	120 hr	—	1.53	19,000
	Dow Corning® SE 9184 CV Thermally Conductive Adhesive	One-part; non-flow; moisture cure; white	48 hr	—	0.84	non-flowing
	Dow Corning® 1-4173 Thermally Conductive Adhesive	One-part; low-flow; rapid-heat cure; grey	—	90 min@100°C 30 min@125°C 20 min@150°C	1.9	58,000
	Dow Corning® Q1-9226 Thermally Conductive Adhesive	Two-part; semi-flowable; self-priming; grey	—	60 min@100°C 30 min@150°C	0.74	50,000
Compound	Dow Corning® SC 102 Thermally Conductive Compound	One-part; gap fill material; white	—	—	0.8	non-flowing
	Dow Corning® TC-5625 Thermally Conductive Compound	One-part; silicone paste; grey	—	—	2.5	127,725
Gel	Dow Corning® SE 4445 CV Thermally Conductive Gel	Two-part; UL 94 V-0 rating; grey	—	45 min@125°C	1.26	14,000
Encapsulant	Sylgard® Q3-3600 A&B Thermally Conductive Encapsulant	Two-part encapsulant; grey	—	60 min@100°C 30 min@150°C	0.77	4,700

NOTE: Please check with your local Dow Corning office for a full product range and availability in your area.

Thermal Interface Materials – Fabricated: Cold applied pre-cured, easy to die cut, highly compressible from both sides to improve thermal resistance.

Product Family	Description	Thermal Conductivity (W/mK)	Thickness (mm)
TP-15XX	Fiberglass reinforced; one or two side tacky; stress relieving; electrically insulating; UL recognized	1.10 – 1.30	0.25/0.5/0.75/1.0/2.0
TP-21XX	Foam reinforced; alumina filled system; both sides compressible; UL recognized	0.73	2.2/3.0/3.8/4.6
TP-22XX	Fiberglass reinforced; reworkable; compressible; electrically insulating	1.64	0.25/0.5/0.75/1.0/1.5
TP-23XX	Ultra compressible; excellent handling and ease of assembly; UL recognized	1.4	2.2/3.0/3.8/4.6
TP-35XX	Fiberglass reinforced; soft; reworkable; high compressibility; electrically insulating	3.50	0.5/0.75/1.0/1.5

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Typical applications:

- Architectural lighting
- Automotive lighting
- Displays
- Indicators, switches, keypads
- LCD backlighting
- Mobile devices
- Projector light sources
- Traffic lights and guidance

Global Connection

For more information about Dow Corning LED solutions, visit www.dowcorning.com/LED, or contact one of our primary locations:

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