

ELASTOSIL® | SEMICOSIL® | THERMAL INTERFACE MATERIALS (TIMS)

COOL DOWN WITH OUR THERMAL INTERFACE MATERIALS

From the automotive and consumer sectors through to power electronics and aerospace applications, nearly all electronic devices require active thermal management to effectively remove heat from components.

WACKER's thermally conductive ELASTOSIL® and SEMICOSIL® silicone products perfectly cool down your devices. Our silicone-based products are supplied in a variety of viscosities, curing speeds and thermal conductivities to provide efficient and reliable thermal heat control for virtually every industry.

Markets and Applications

ELASTOSIL® and SEMICOSIL® silicone products are used in Automotive & Industrial applications, Consumer Electronics, Power Electronics, Micro-electronics, Lighting, Energy, Aerospace and Telecommunications. Typical applications include:

Batteries: Heat management during charge and discharge cycles, which is crucial for optimizing performance

Power Electronics: Encapsulants and gap fillers improve heat flow in inductors, transformers and chargers, optimizing performance during charging and increasing product longevity

Electronic Control Units and Sensors:

Provision of robust thermal interface and protection of delicate electrical components, keeping devices with high heat generation within the desired working temperature

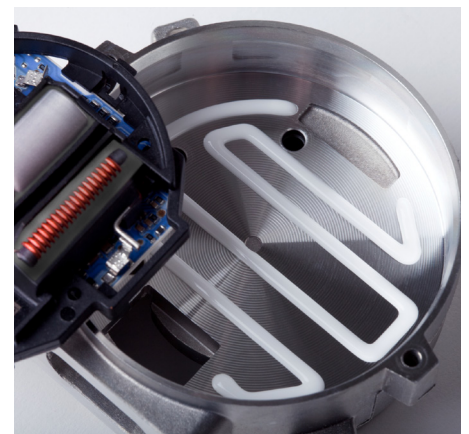
Microelectronics / Lighting: TIMs used between a processor die and a heat spreader at TIM-1 level, e.g. LEDs and OLEDs

Benefits of Using High-Performance TIMs

- Higher performance and potential safety
- Increased operational lifetime
- Reduced power consumption due to increased efficiency
- System cooling consumes less (external) power
- Reduced total cost of ownership

Silicone-Based TIMs – the Leading Product Solution

Silicones offer flexibility in a wide temperature range (-45 °C to +150 °C), making them an extremely versatile chemistry. Even under extreme operating conditions, where other organic materials often degrade, our thermally conductive silicones efficiently keep devices at their desired working temperature. Silicones are just the right product whenever high-temperature resistance and permanent flexibility are top priorities. Further, silicones tend to expose components to less stress.

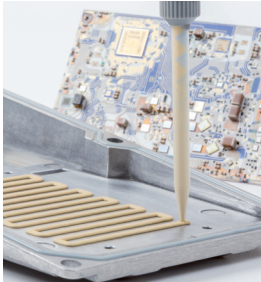
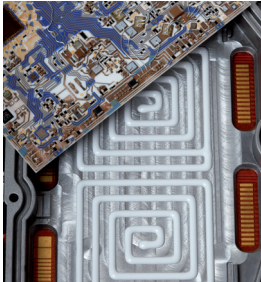
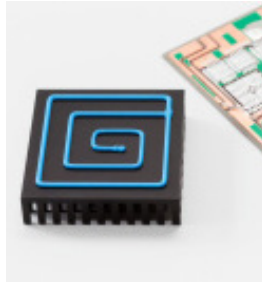
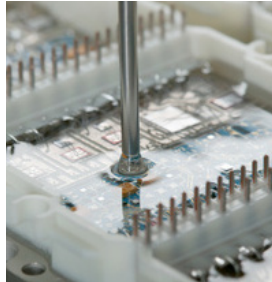


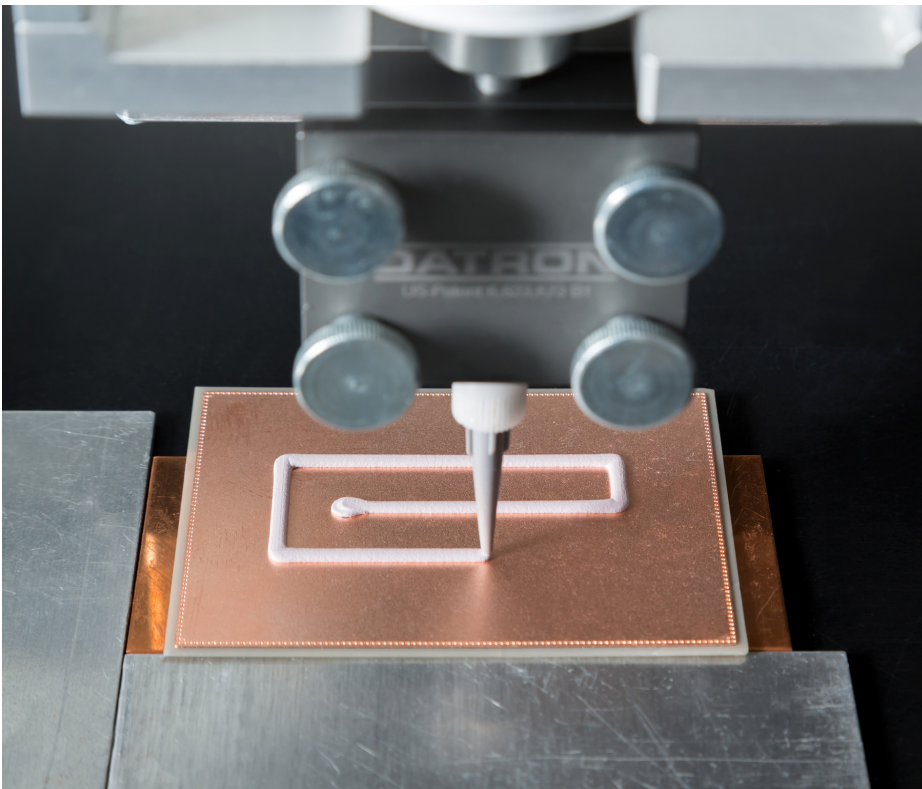
Core Value of WACKER's Silicone-Based Thermal Interface Materials:

- Tailor-made according to your innovative requirements
- Low-density grades available
- Superb flow and processing properties for dispensing ease
- Maintain physical property and full performance even under extreme temperatures (-45 °C to +150 °C)
- Excellent thermal conductivity for heat dissipation
- Conform and adhere to component shape – good wetting properties
- Proven reliability and long-term performance
- Stable properties during aging
- Low volatiles content and low abrasivity
- Selected products can be provided with automotive Standard IATF 16949



Our Thermal Management Portfolio

	Gap Fillers	Adhesives	Grease / Paste	Encapsulants / Potting
				
Thermal conductivity (TC)	Customizable to your needs / 1–8 W/mK (TIM-2) and 4–12 W/mK (TIM-1)			
Curing type	Addition	Addition / condensation	Non cure	Addition
Viscosity	Customizable to your needs		Non flowable, pasty	Flowable, low viscous



Learn More

WACKER offers more than just a global leading portfolio of tailor-made silicone-based materials. As your partner, we offer innovation-driven products, advanced application and process know-how, and unique global customer service. To find out how we can support your business, visit wacker.com

SEMICOSIL®

ELASTOSIL®

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