



Product Information

**DOWSIL™ TC-4605 and DOWSIL™ TC-4605 HLV
Thermally Conductive Encapsulants**



Imagine



Thermally Conductive Encapsulant

Dow's versatile portfolio of thermally conductive silicone encapsulants offers solutions for a broad range of automotive PCB (system) assembly, from standard and advanced assemblies to next-generation applications that demand ever-greater integration and higher power densities.

DOWSIL™ TC-4605 Thermally Conductive Encapsulant

DOWSIL™ TC-4605 Thermally Conductive Encapsulant is two-part Silicone Elastomer, heat cure for manufacturing flexibility. It is 1 W/m•K thermally conductive encapsulant/pottant for PCB protection from different environmental conditions and thermal management for devices. It can act as a buffer for wire and components because of its soft characteristic.

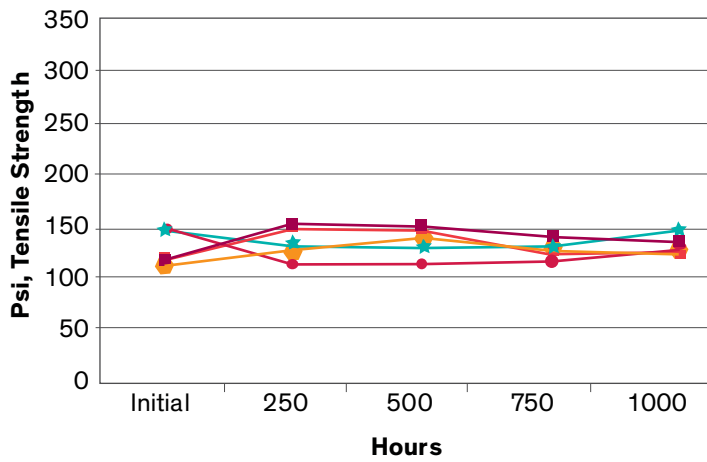
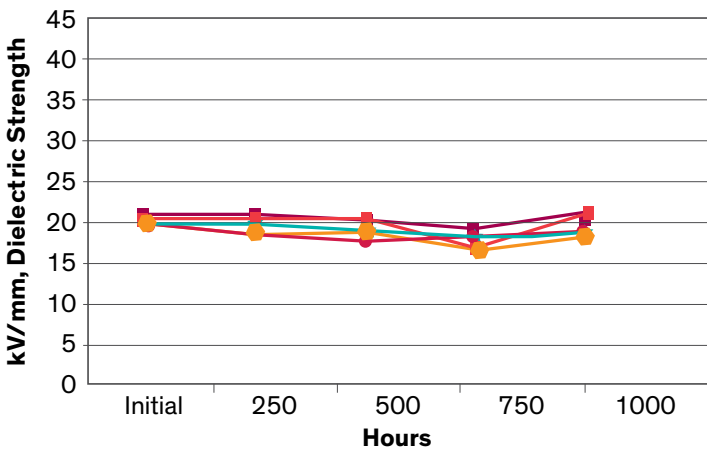
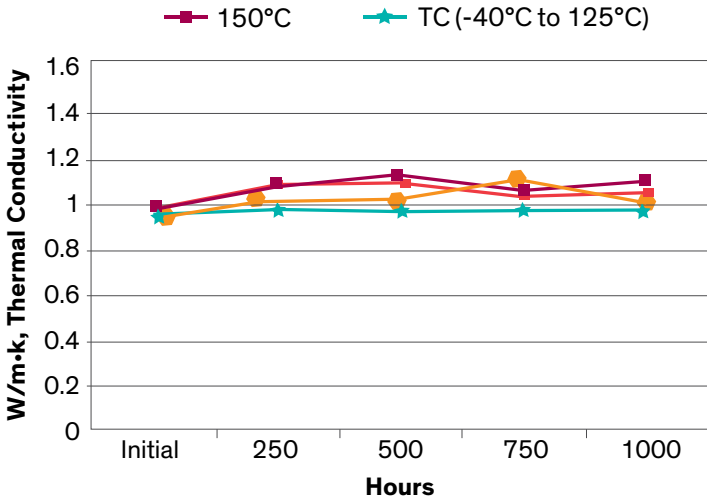
DOWSIL™ TC-4605 HLV Thermally Conductive Encapsulant

DOWSIL™ TC-4605 HLV Thermally Conductive Encapsulants a two-part Silicone Elastomer, heat cure for manufacturing flexibility. It is 1 W/m•K thermally conductive encapsulant/pottant for PCB protection from different environmental conditions and thermal management for devices. Its lower viscosity compared to 1 W/m•K thermal conductivity provides better workability and productivity. This product also gives you better mechanical properties and adhesion on aluminum for your application.

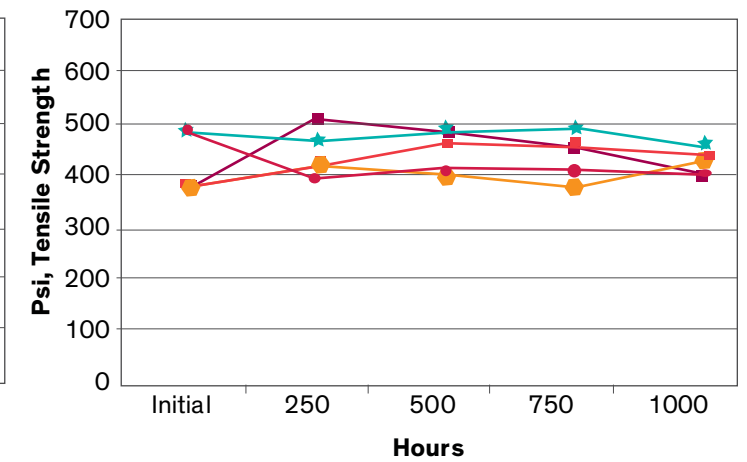
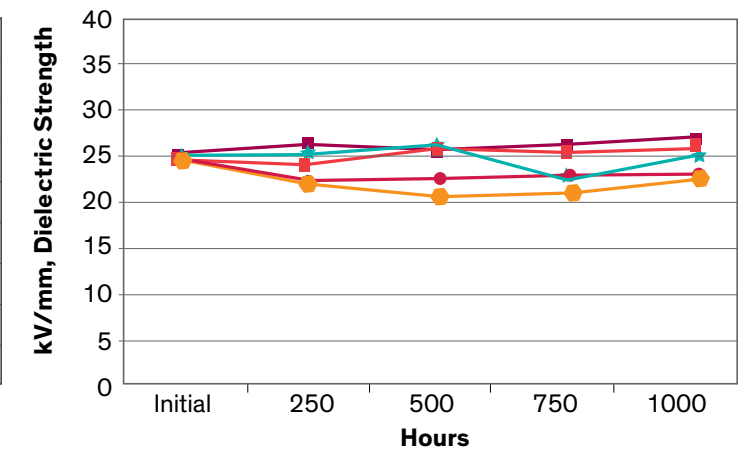
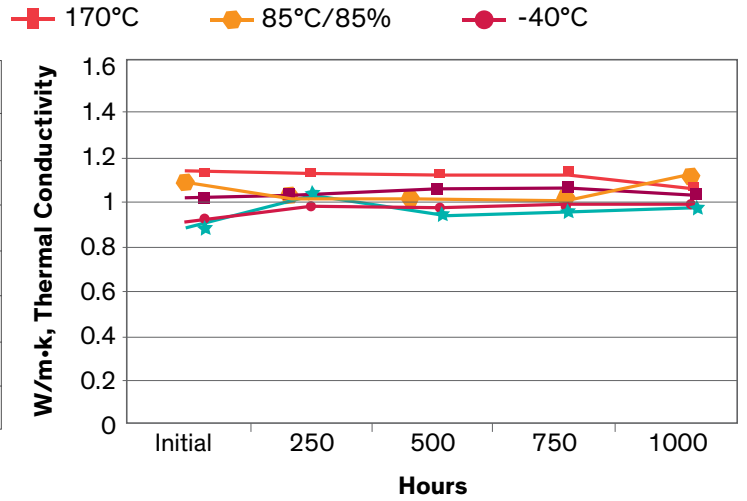
Material Properties

Property	DOWSIL™ TC-4605 Thermally Conductive Encapsulant	DOWSIL™ TC-4605 HLV Thermally Conductive Encapsulant
Color	Gray	Gray
Form	Two-part, Heat-cure	Two-part, Heat-cure
Mix ratio	1:1	1:1
Viscosity, Part A	3100 cP	1600 cP
Viscosity, Part B	2500 cP	1400 cP
Viscosity, mixed	2900 cP	1900 cP
Durometer, Shore A	30	60
Specific gravity	1.67 g/cm ³	1.67 g/cm ³
Pot life	135 min	130 min
Thermal conductivity	1.00 W/m•K	1.00 W/m•K
Adhesion to aluminum (anodized)	110 psi	220 psi
Tensile strength	110 psi	375
Elongation	100%	95%
Shelf life	9 months	6 months
Dielectric strength	21 kV/mm	24 kV/mm
Volume resistivity	3.30E+14 Ohm•cm	1.08E+15 Ohm•cm
Heat cure time	1 hour @ 120°C	1 hour @ 120°C

Performance Data for DOWSIL™ TC-4605
Thermally Conductive Encapsulant



Performance Data for DOWSIL™ TC-4605 HLV
Thermally Conductive Encapsulant



One Company, Many Transportation Solutions

DOWSIL™ TC-4605 Thermally Conductive Encapsulant and DOWSIL™ TC-4605 HLV Thermally Conductive Encapsulant are available from Dow worldwide. Specially designed to address the thermal challenges of today's most demanding device assembly, these high-performance materials round out Dow's broad and expanding portfolio of advanced solutions for thermal management.

Learn More

We bring more than just an industry-leading portfolio of advanced silicone-based materials. As your dedicated innovation leader, we bring proven process and application expertise, a network of technical experts, a reliable global supply base and world-class customer service.

To find out how we can support your applications, visit consumer.dow.com/pcb.

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