

TEMPERATURE MANAGEMENT BEYOND THE EXPECTED BATTERY THERMAL INTERFACE MATERIALS

THERMAL CONDUCTIVE GAP FILLERS

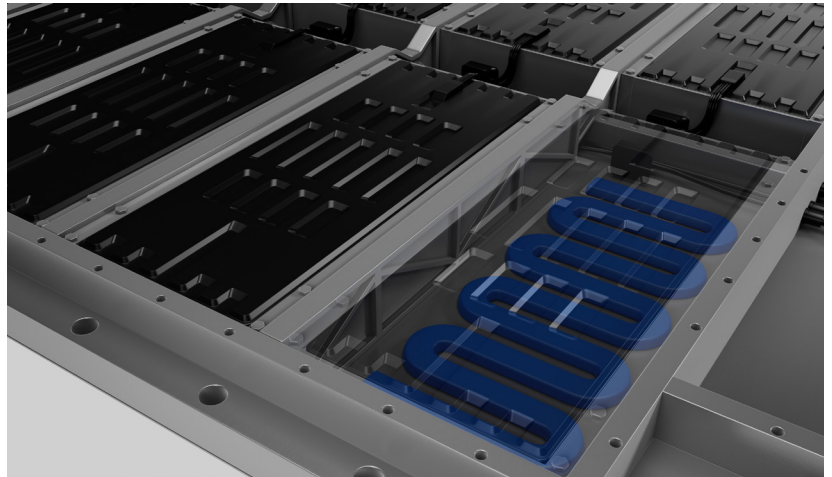
IMPROVED ASSEMBLY PROCESS WITH SikaBiresin® TC

CHARGE YOUR AMBITION WITH SIKA. Using our long-term experience in dielectric potting, Sika has developed thermal interface materials for battery systems, that ensure optimal heat transfer in battery packs and modules.

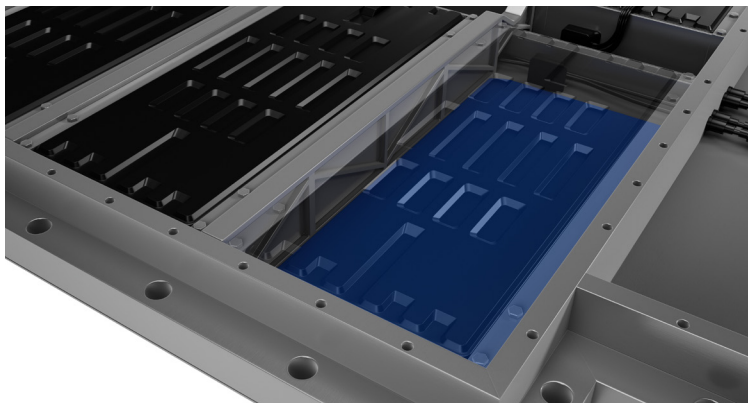
The SikaBiresin® TC series are used for Thermal Conductive (TC) gap filling applications. It also serves as a functional interface in the battery arrays and works interactively to provide heat transfer for active temperature control systems of the battery packs.

Products are available in both silicone and silicone-free formulations. Performance levels are available in the range of up to 3.0 W/mK, products are room temperature cured and glycol resistant, and meet the UL94-V0 standard.

“On-demand” adjustable curing processes add value to conventional assembly processes. Additionally, thanks to low compression force and viscosity, SikaBiresin® TC gap allowing for easy assembly combining with low abrasion. Moderate adhesion strength also allows for disassembly and serviceability.



Thermal management for modules with SikaBiresin® TC gap filler



SikaBiresin® TC gap fillers allowing for easy assembly

- HIGH HEAT TRANSFER
- UP TO 3.5 W/m.K
- LOW COMPRESSION FORCE
- EASY DISASSEMBLY & SERVICEABILITY

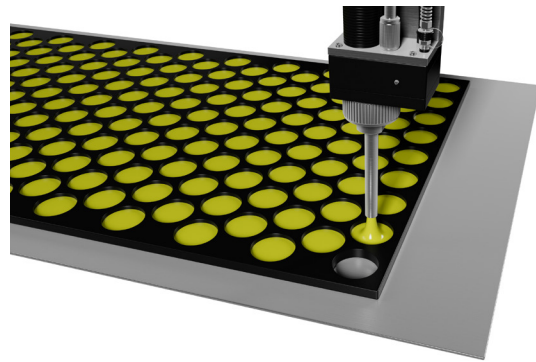
THERMAL CONDUCTIVE ADHESIVES

ENHANCED BODY STRUCTURE WITH SIKA TCA SOLUTIONS

THE RIGHT TECHNOLOGY. Thermal conductive adhesives (TCA) offer added benefits for manufacturers seeking to meet future requirements. As manufacturers transition to Cell-to-Pack designs in order to improve the stiffness and torsional characteristics of the vehicle's body structure, bonding with heat-conductive adhesives will become more common.

Sika's high-performance bonding solutions offer thermal-conductivity and electrical isolation characteristics for packing the battery cells inside the array modules.

Sika TCA offers thermal conductivity performance from 0.8-2.0 W/m.K as well as high strength and excellent adhesion; all without surface pre-treatment of metals. All products meet the UL94-V0 standard and ease of use in the application, whether applied manually or with standard automated equipment.



Sika TCA Series enhance the heat transfer and make array modules stronger and lighter

STRUCTURAL

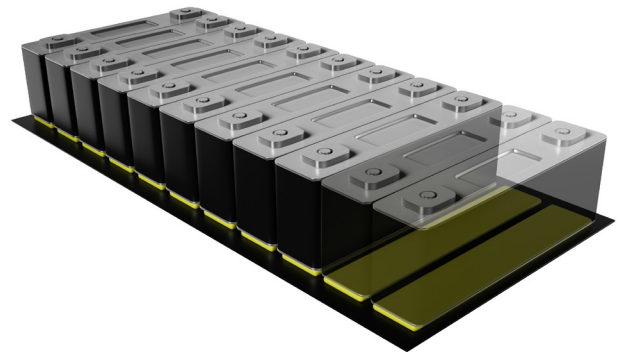
Heat transfer and electrical isolation bonding solutions for packing the battery cells inside the array modules.

UP TO 2.0 W/m.K

thermal conductivity range, excellent adhesion and meet the UL94-V0 standard.


HIGH STIFFNESS

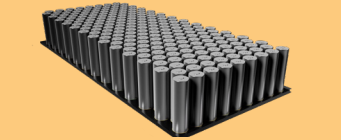

and torsional character enhancement for the vehicle as battery design transitions to Cell-to-Pack designs.



Structural cell fixation with thermal conductive SikaForce® TC adhesive

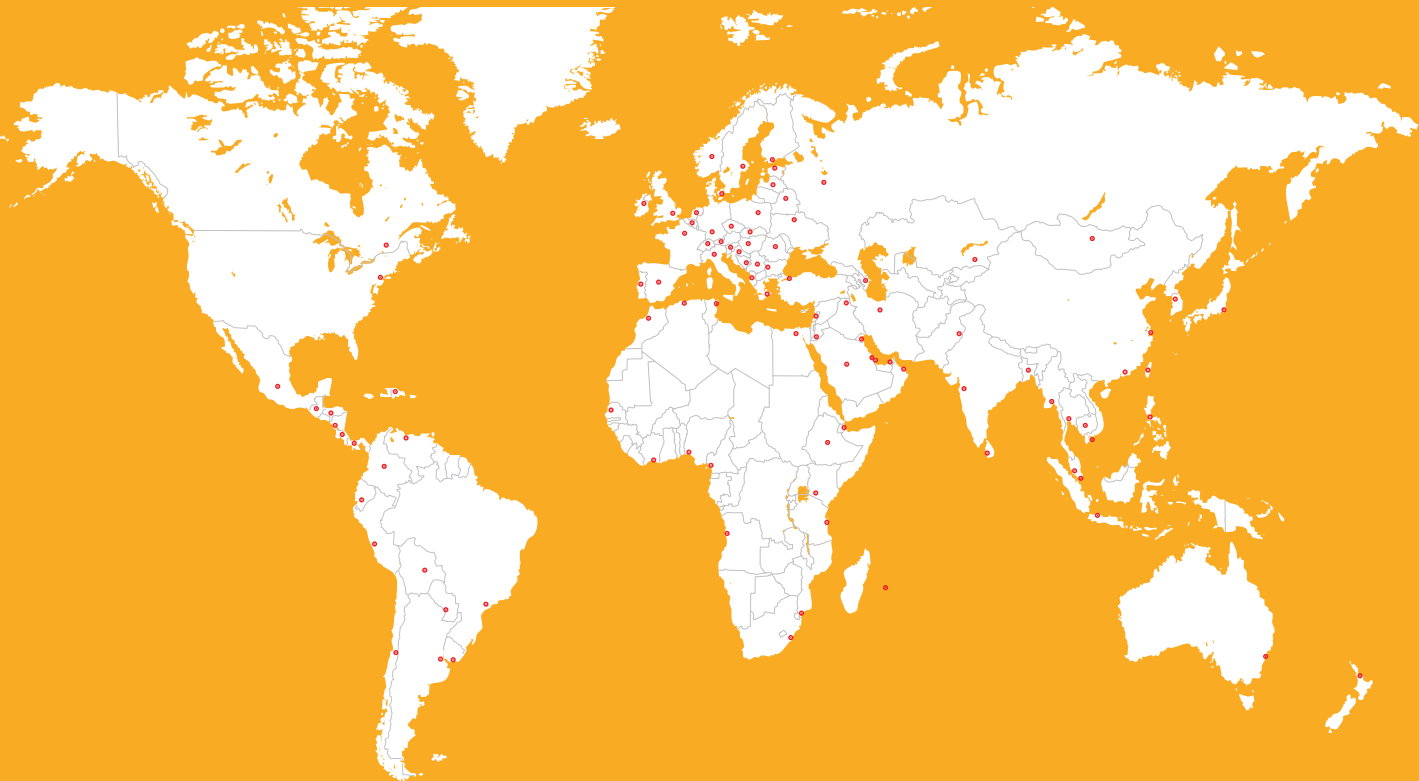
With the TIM series, Sika offers the broadest range of products for new bonding solutions and for thermal management that overcome challenges in diverse battery storage systems designs. Accommodation of the requirements of the new CELL-TO-PLATE BONDING or CELL-TO-TRAY trends, as well the current MODULE TO TRAY ASSEMBLY, are answered readily with all products, also offering flexibility to the manufacturing process and throughput targets.

Product Family	Thermal Conductive Gap Fillers		Key Benefit
	Technology	Gap Filler Application	
SikaBiresin® TC	2C STP 2C Silicone	MODULE TO TRAY ASSEMBLY 	Thermal Conductive light weight technology. Low compression force for assembly. Allowing serviceability. UL94-V0.

Product Family	TCA		Key Benefit
	Technology	TCA Application	
SikaForce® TC Sikaflex® TC SikaFast® TC	2C PU 2CSTP 2C Hybrid 2C Acrylate	CELL-TO-PLATE BONDING 	Heat transfer and structural bonding. Thermal conductivity range 0.8-2.0 W/mK . Fast curing. UL94-V0.
		CELL-TO-TRAY 	Heat transfer and structural bonding. Increasing the torsional stiffness of the chassis. UL94-V0.

WHILE THE LANDSCAPE OF E-MOBILITY WILL CONTINUE TO EVOLVE, APPLICATIONS IN SEALING AND BONDING WILL ALSO CONTINUE TO CHANGE, SIKA'S CONSTANT FOCUS ON TECHNOLOGY TRENDS WILL ENSURE OUR SOLUTIONS REMAIN VALUABLE TO THE CUSTOMERS.

GLOBAL REACH BUT LOCAL PARTNERSHIP



FOR MORE INFORMATION:



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Our most current General Sales Conditions shall apply.
Please consult the Data Sheet prior to any use and processing.



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BUILDING TRUST

