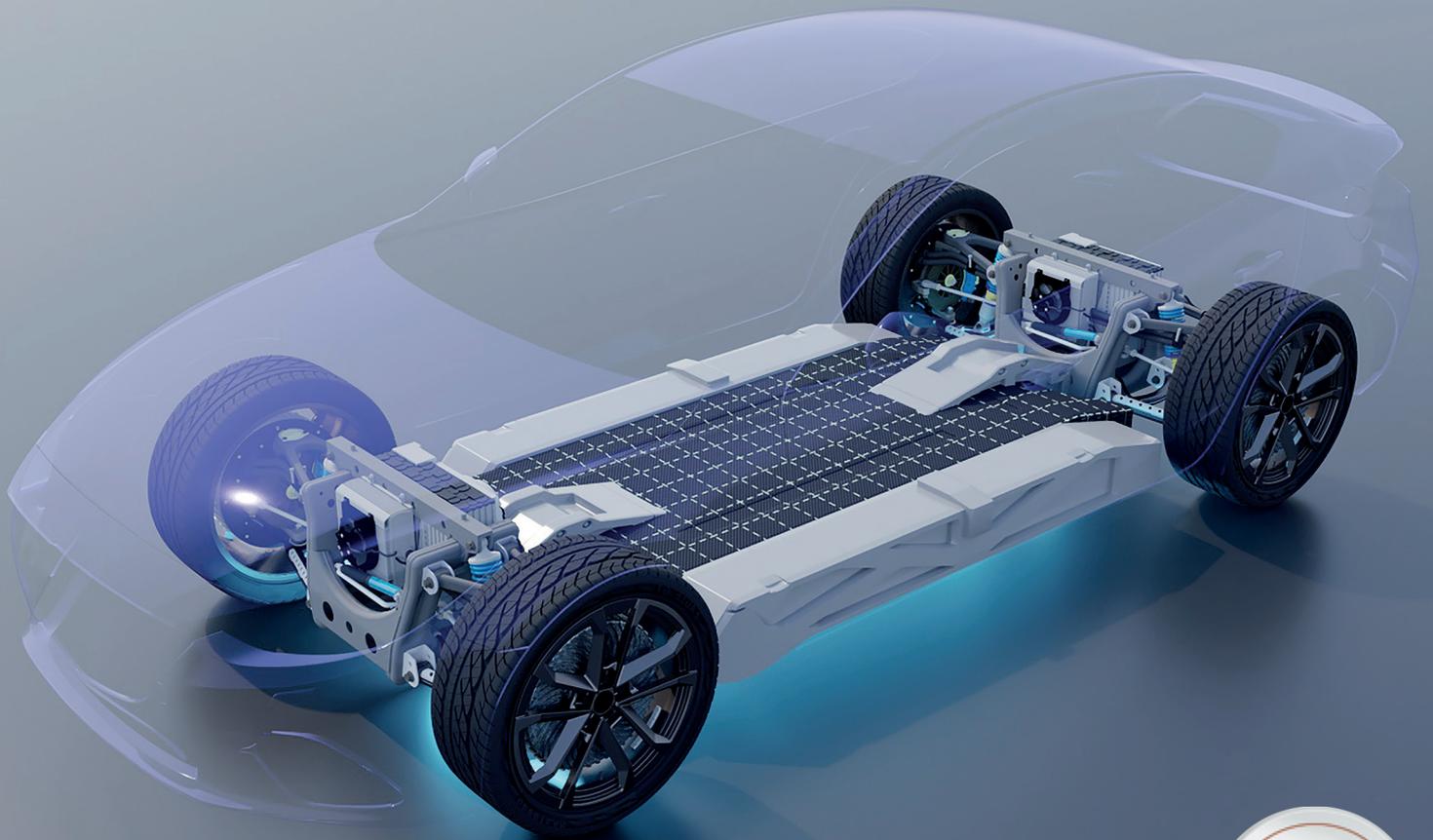


Thermal Insulation Systems

HS900

High Performance Heat Shield
with Superior Thermal Insulation

- Battery Electric Vehicles (BEV)
- Plug-in Hybrid Electric Vehicles (PHEV)
- Fuel Cell Electric Vehicles (FCEV)



Automotive



HS900

Protects Occupants in Case of Thermal Runaway Events from Lithium-Ion Batteries

Thermal protection is essential to avoid overheating of the passenger compartment during inadvertent malfunction of lithium-ion batteries. Our product enables the fulfillment of legal safety demands, e.g., GB 38031-2020, with minimum installation space. We offer fully engineered solutions that meet customer requirements, validated in our state-of-the-art laboratory.

Benefit from these HS900 material properties:

- Superior resistance to temperature and hot gas particle impact
- Ultra-thin insulation material that protects with just 1.8 mm of thickness
- Thermal and electrical insulating
- Withstands vibrational fatigue and wear
- 3D-formable and machinable

Specifications

		HS900	Test Method
Thermal Properties			
Flame resistance	> 30 min	1400 °C	ST-I-DE-014 (4.2.1)
Hot gas particle resistance		> 80 s	ST-I-DE-014 (4.2.3)
Thermal insulation	@ 1200 °C	< 360 °C	ST-I-DE-014 (4.2.2)
Thermal conductivity	@ 25 °C @ 300 °C	0.335 W/(m·K) 0.237 W/(m·K)	LFA
Thermal capacity	@ 25 °C @ 300 °C	987 J/(kg·K) 1382 J/(kg·K)	DSC
Physical Properties			
Area weight		2.5 kg/m ²	ST-I-DE-016
Thickness		1.8 mm	
Electrical Properties			
Breakdown voltage	standard operation after thermal runaway event	> 15 kV > 5 kV	ST-I-DE-015
Mechanical Properties			
Tensile strength		40 MPa	Tensile tester
Compression set		< 0.1 mm	
Young's modulus @ compressive load	< 5 MPa 5 to 20 MPa	380 N/mm ² 1070 N/mm ²	

Contact us to solve your e-mobility thermal insulation challenges at insulation@oerlikon.com.