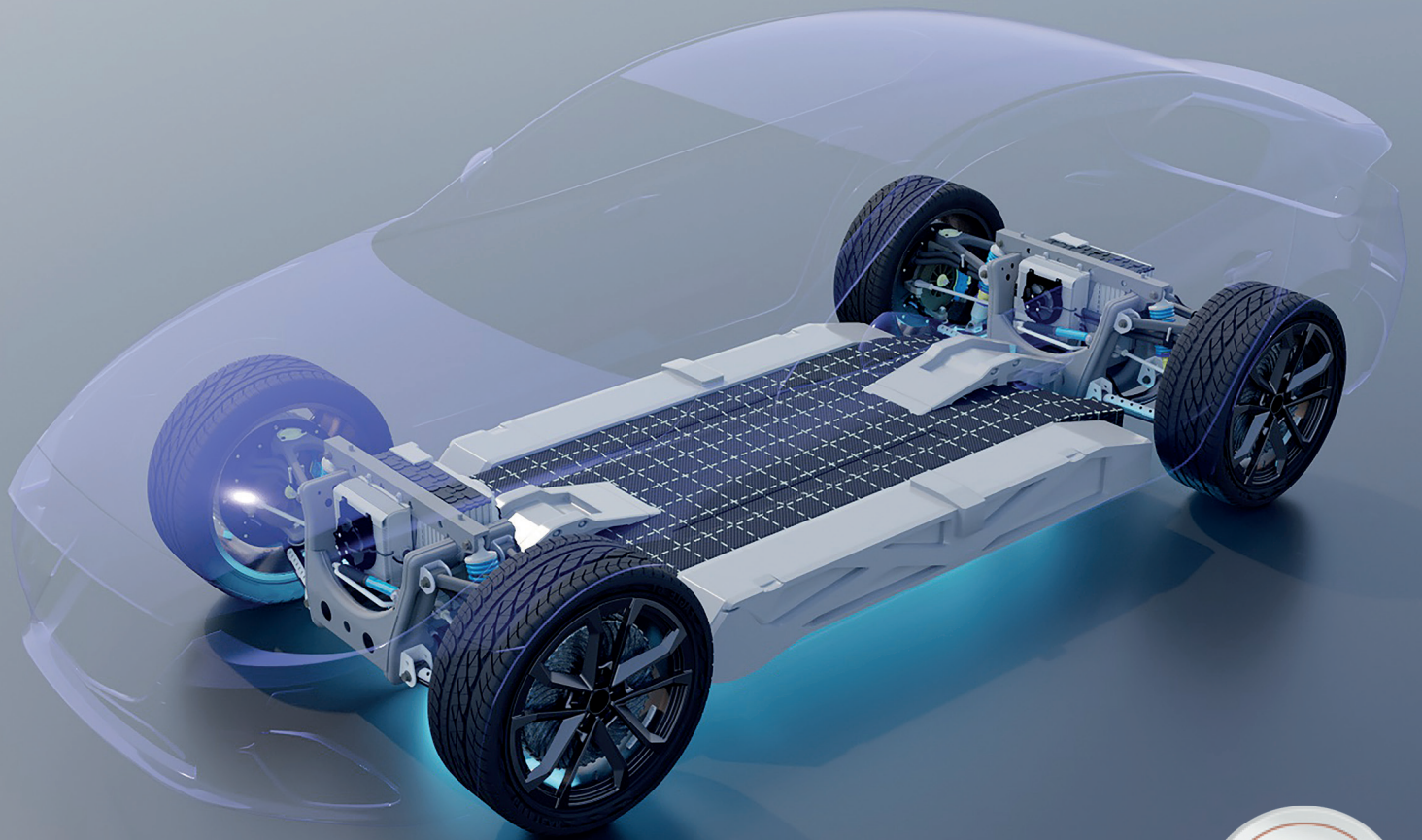


Thermal Insulation Systems

HS910

High Performance, Ultra-Thin Heat Shield with Excellent Thermal Insulation

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



Automotive



HS910

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 HS910 material properties:

- Excellent resistance to temperature and hot gas particle impact
- Ultra-thin insulation material that protects with just 1.2 mm of thickness
- Thermal and electrical insulating
- Withstands vibrational fatigue and wear
- 3D-formable and machinable

Specifications

		HS910	Test Method
Thermal Properties			
Flame resistance	> 30 min	1400 °C	ST-I-DE-014 (4.2.1)
Hot gas particle resistance		> 35 s	ST-I-DE-014 (4.2.3)
Thermal insulation	@ 1200 °C	< 390 °C	ST-I-DE-014 (4.2.2)
Thermal conductivity	@ 25 °C @ 300 °C	0.226 W/(m·K) 0.174 W/(m·K)	LFA
Thermal capacity	@ 25 °C @ 300 °C	1092 J/(kg·K) 1475 J/(kg·K)	DSC
Physical Properties			
Area weight		1.6 kg/m ²	ST-I-DE-016
Thickness		1.2 mm	
Electrical Properties			
Breakdown voltage	standard operation after thermal runaway event	> 8 kV > 3 kV	ST-I-DE-015
Mechanical Properties			
Tensile strength		30 MPa	Tensile tester
Compression set		< 0.05 mm	
Young's modulus @ compressive load	< 5 MPa 5 to 20 MPa	260 N/mm ² 850 N/mm ²	

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