oerlikon

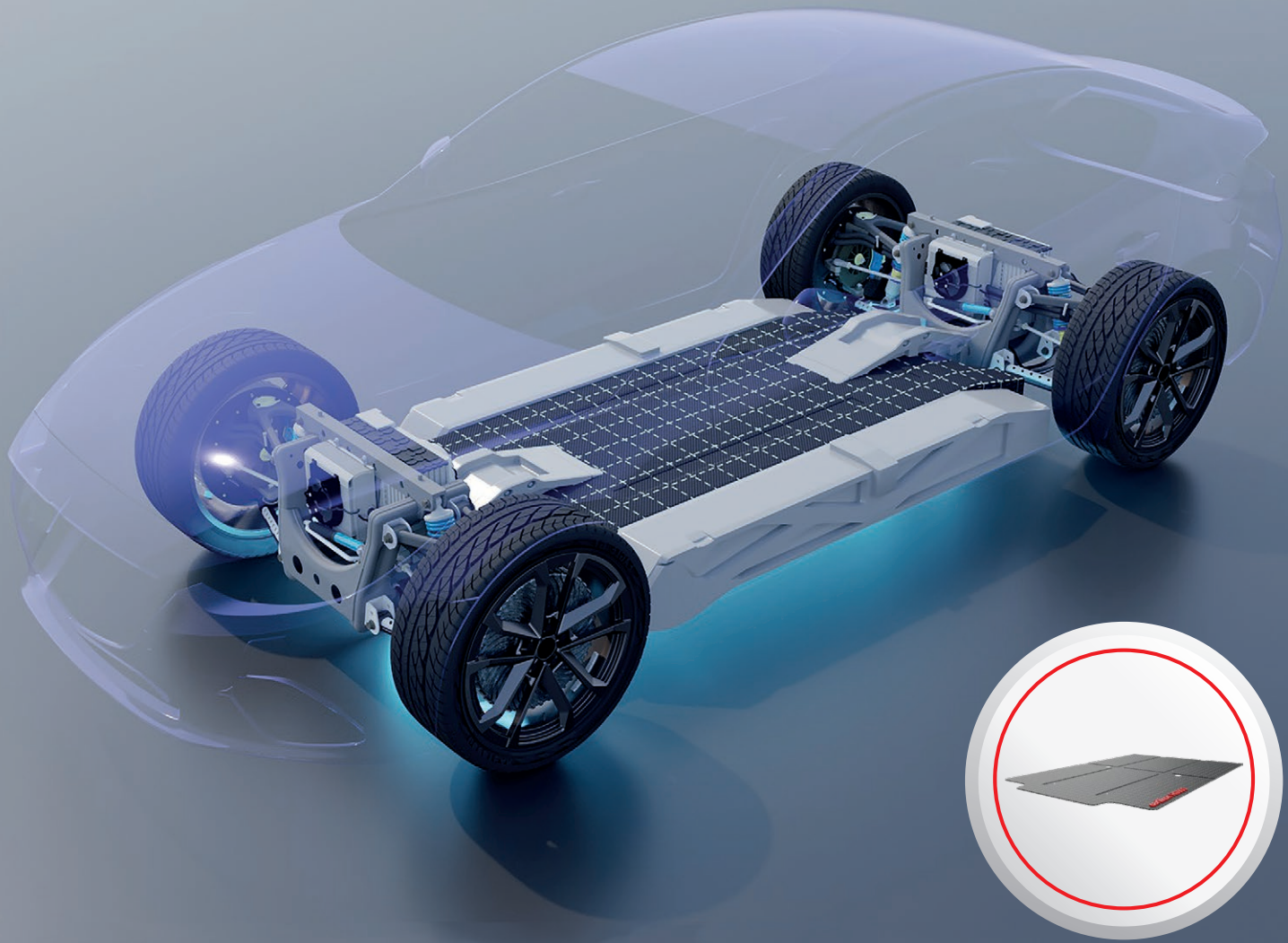
Thermal Insulation Systems

HS900

High Performance Heat Shield with Superior Thermal Insulation

For Safety in:

- Battery Electric Vehicles (BEV)
- Fuel Cell Electric Vehicles (FCEV)



HS900 Series

Engineered Ultra-Thin and High Temperature Resistant Heat Shield

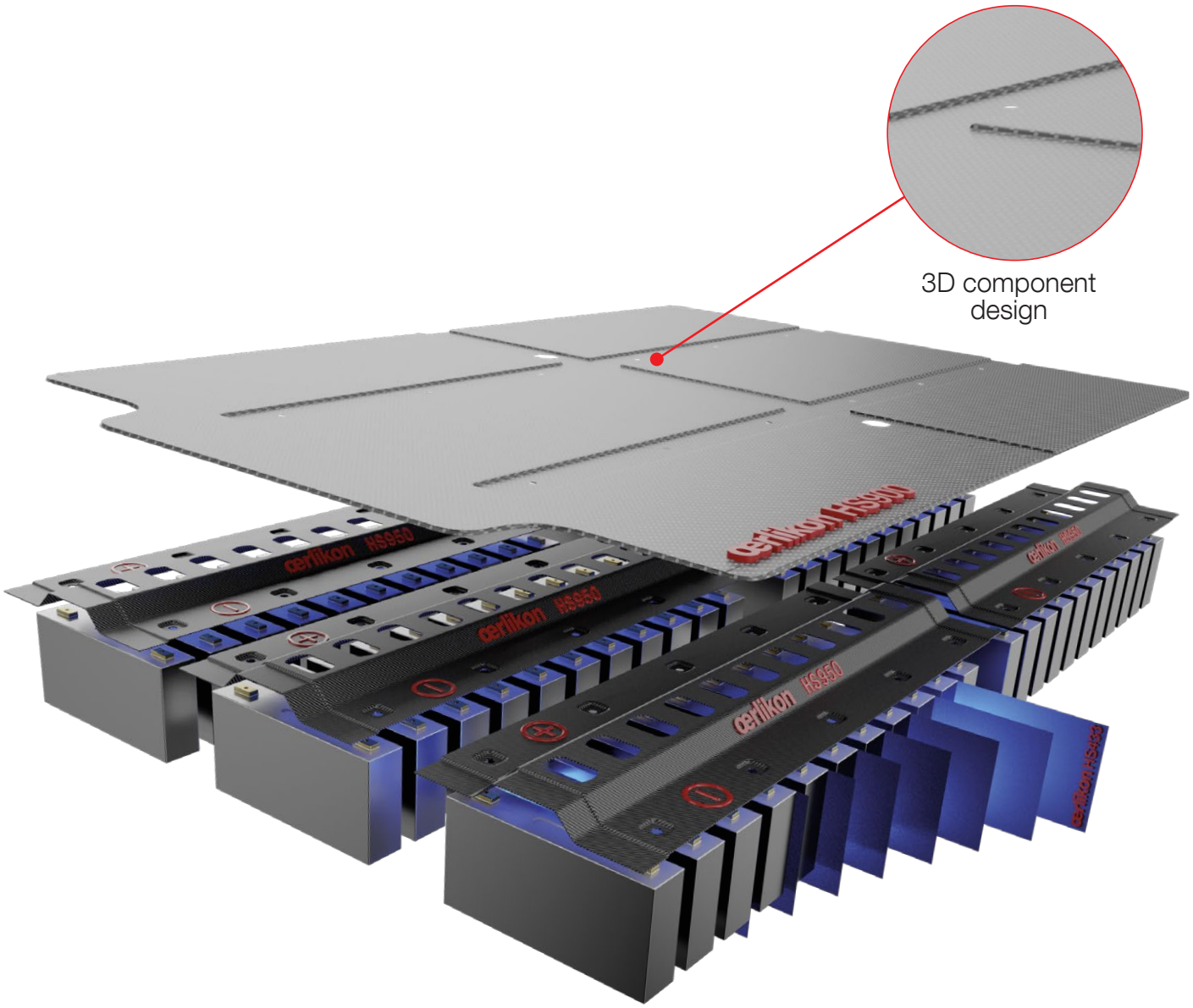
Specifications

		HS912	HS915	HS918	Test Method
Thermal Properties					
Thermal Performance @ >30 min [°C]		1400	1400	1400	ST-I-DE-014 (4.2.1)
Thermal Insulation Performance Reverse Side Temperature @ 1200 °C [°C]		390	370	355	ST-I-DE-014 (4.2.2)
Hot Gas Particle Impact Resistance [sec]		35	55	80	ST-I-DE-014 (4.2.2)
Thermal Conductivity [W/(m.k)]	25 °C 300 °C	0.23 0.17	0.27 0.21	0.33 0.24	LFA
Physical Properties					
Density [g/cm^3]		1.33	1.37	1.39	DIN EN ISO 1183
Thickness [mm]		1.2	1.5	1.8	DIN ISO 9073-2
Electrical Properties					
Dielectric Strength [kV]		>12	>15	>18	ST-I-DE-015
Mechanical Properties					
Tensile Strength [MPa]		30	35	40	DIN EN ISO 527-4
Young's Modulus @ Compressive Load [N/mm^2]	<5 MPa 5 to 20 MPa	260 850	320 960	380 1070	DIN ISO 10743

For further technical and unique requirements please contact us

HS900 Series

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



Benefits of HS900 Series:

- Superior temperature resistance at **1400 °C**
- Particle impact resistant
- 3D component design
- Excellent electrical insulation
- Ultra-thin & ultra-light material
- Meets highest global battery safety requirements and standards
- Vibrational and fatigue resistance
- Mitigate thermal propagation
- ESG compliant
  (Mica free, non-petroleum based)

For more information, contact us at **insulation@oerlikon.com**.

Oerlikon superior heat resistant materials meet all safety requirements within the UN GTR No.20 legislation.

All international and national regulations are based upon strict safety requirements which requires a minimum of five minutes to allow the occupants safe evacuation from the vehicle before fire outspread due to a thermal event.

Regulations

China - GB 38031
Europe - ECE R100
India - AIS-038
Japan - Harmonized with UN R100
S. Korea - KMVSS 18-3
USA - UL2580

About Oerlikon
Oerlikon (SIX: OERL) is a global innovation powerhouse for surface engineering, polymer processing and additive manufacturing. The Group's solutions and comprehensive services, together with its advanced materials, improve and maximize the performance, function, design and sustainability of its customers' products and manufacturing processes in key industries. Pioneering technology for decades, everything Oerlikon invents and does is guided by its passion to support customers' goals and foster a sustainable world. Headquartered in Pfäffikon, Switzerland, the Group operates its business in two Divisions – Surface Solutions and Polymer Processing Solutions. It has a global footprint of more than 12 000 employees at 202 locations in 37 countries and generated sales of CHF 2.65 billion in 2021.

Information is subject to change without prior notice.

BRO-0043.2 – HS900 Series

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