

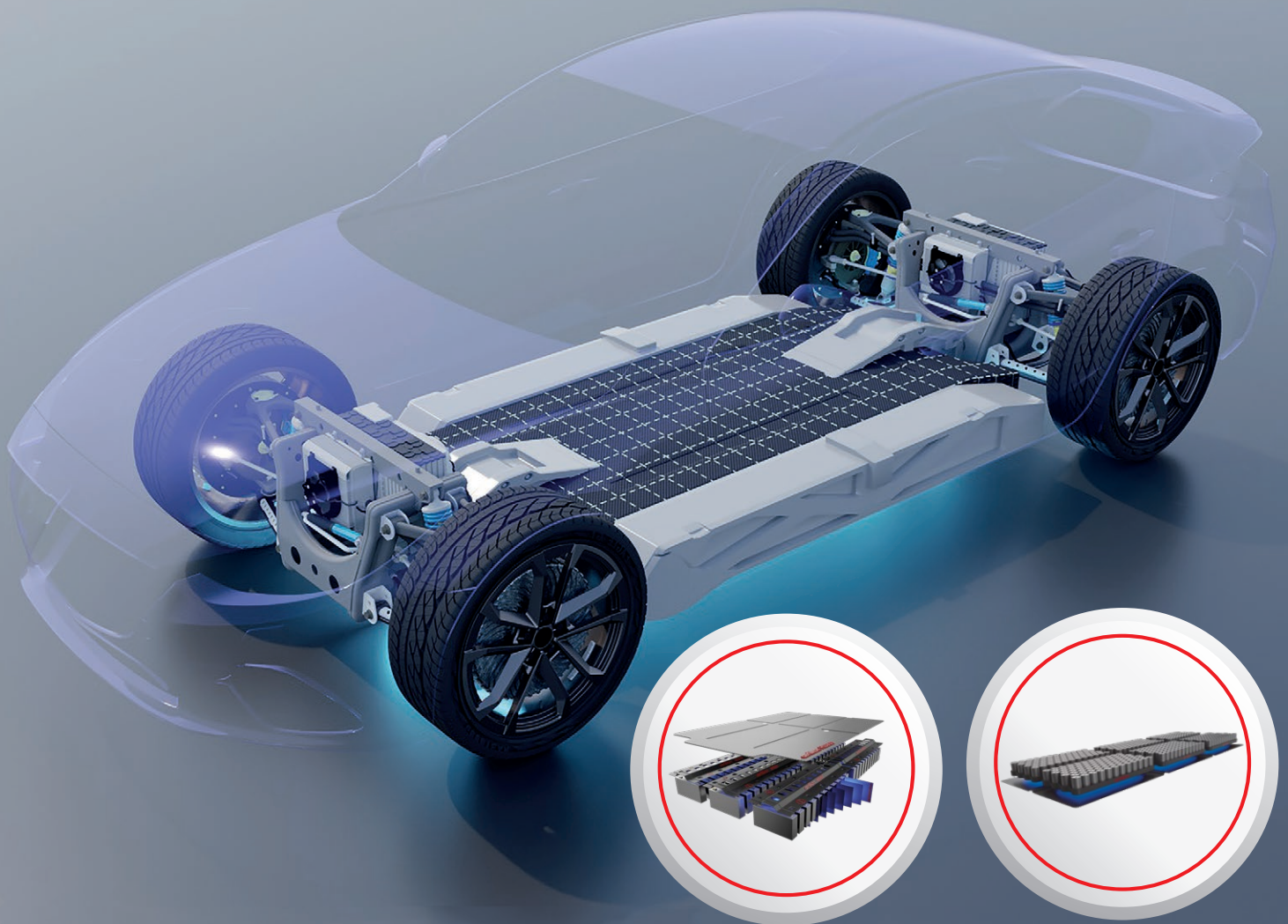
Thermal Insulation Systems

HS850 / HS950

High-Performance, Heat Resistant Components for
Module Covers and Hot Gas Guidance

Safety in Battery Electric Vehicles

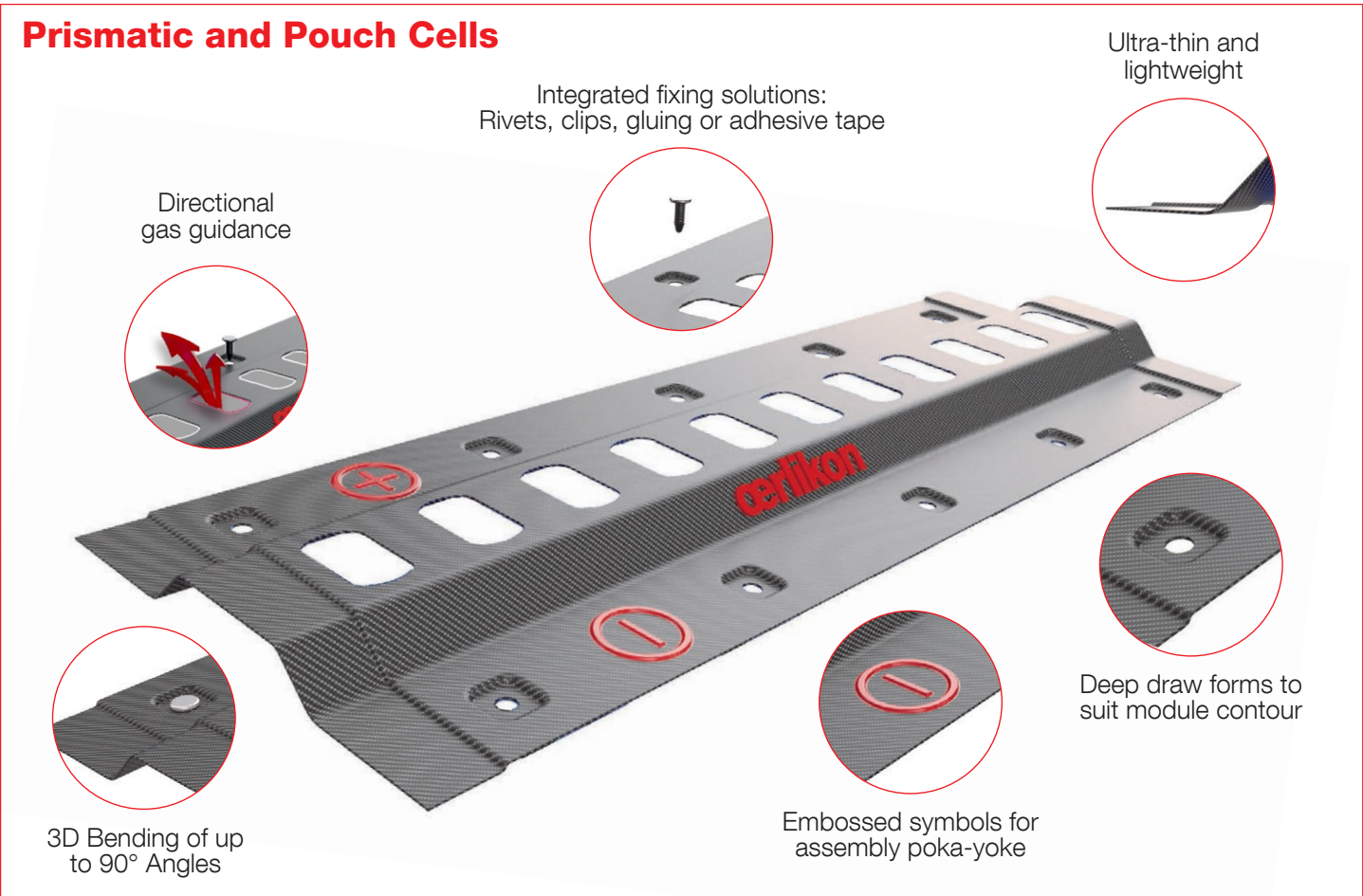
- Zero Thermal Propagation
- Allows Limp Home Driving Mode



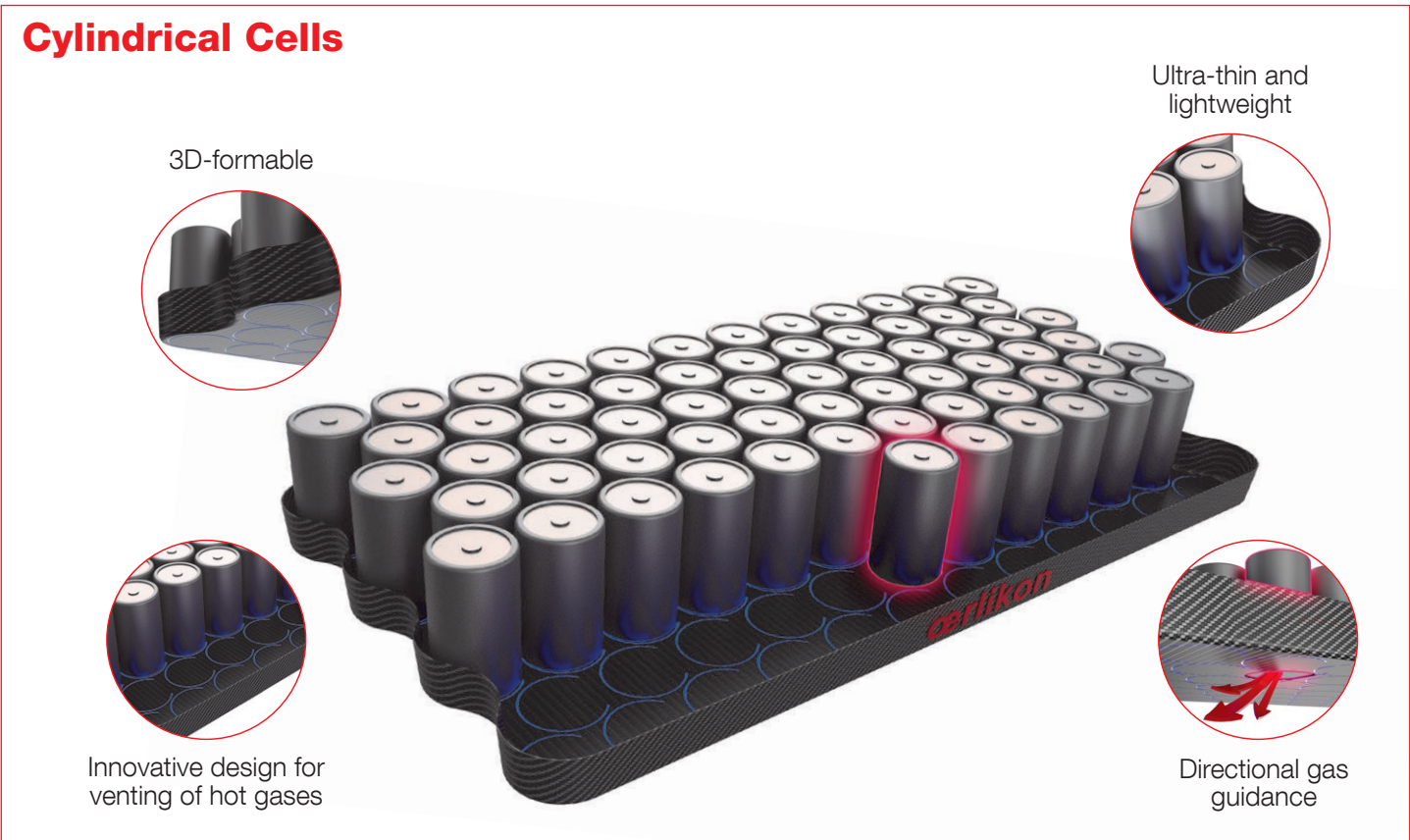
HS850 / HS950

High-Performance Materials to Prevent Dangerous Arcing and Thermal Propagation in all three Battery Cell formats

Prismatic and Pouch Cells



Cylindrical Cells



HS850 / HS950

Engineered Ultra-thin, High-temperature Resistant Material

Specifications

		HS850	HS950	Test Method
Thermal Properties				
Thermal Performance [°C]		1000	1200	ST-I-DE-014 (4.2.1)
Thermal Conductivity [W/(m.k)]	@ 25 °C	0.29	0.33	DIN 52612 / LFA
	@ 300 °C	0.35	0.39	
Physical Properties				
Density [g/cm³]		1.38	1.75	ST-I-DE-016
Thickness [mm]		0.8	0.8	DIN ISO 9073-2
Electrical Properties				
Breakdown voltage [kV/mm]		8	10	ST-I-DE-015
Mechanical Properties				
Tensile Strength [MPa]		175	195	DIN EN ISO 527-4
Young's Modulus [N/mm²]		15,500	17,300	DIN EN ISO 527-4
Flexural Strength [MPa]		33	40	DIN EN ISO 14125

For further technical and unique requirements please contact us

Benefits:

- Superior temperature resistance
- Zero thermal propagation
- Safe directional venting of hot gases and conductive particles
- 3D component design
- Allows limp home driving mode
- Vibrational and fatigue resistance
- ESG compliant (Mica-free, non-Petroleum base)
- Meets the highest global battery safety requirements and standards
- Innovative design solutions for all battery types

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 13 000 employees at 170 locations in 37 countries and generated sales of CHF 2.9 billion in 2022.

Information is subject to change without prior notice.