ALPHA
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ZeroAdvance™ Thermal Runaway Protection Series: ZA090 Protective Cell-Cell Composite

ZA090 represents a series of next-generation composite materials specially engineered for a wide range of battery applications. This unique design incorporates a compressible foam element that provides vibration dampening and accommodates cell pressure changes, while maintaining superior thermal and electrical insulation properties in a compact, low-profile composite.

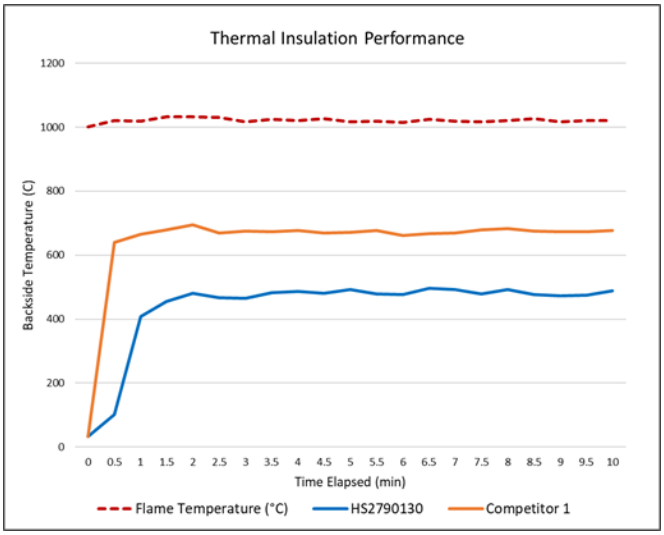
In the case of a thermal runaway event caused by severe cell malfunction, ZeroAdvance™ Series heat shields are designed to contain and effectively delay flame propagation to other vehicle compartments.

KEY FEATURES

- Compact, flame resistant thermal insulation barrier
- High compressibility to accommodate variable cell pressure
- Vibration dampening
- Electrically insulating
- Low thermal conductivity
- Flexible design, easily cut to shape

APPLICATIONS

- Compression Pad Thermal Barrier for Pouch Cells
- Module Sealing, Insulation and Fire Protection
- Pack Level Thermal Protection



PRODUCT SPECIFICATIONS		ZA090	Test Method
Weight		1.2 kg/m^2	ASTM D-3776
Thickness		3.3 mm	ASTM D-1777
Density		0.36 g/cm^3	ASTM D-792
Tensile Strength		22.5 kg/cm	ASTM D-5034
Compression Force Deflection		20 kPa	ASTM D1056
Puncture Resistance		190 cm-kgf	ASTM D-751
Flame Resistance	>10 minutes	1100°C	AEC Internal
Thermal Insulation	Max cool-side temperature reached after 1000°C exposure	495°C	AEC Internal
Dielectric Strength per unit thickness		3.9 kV/mm	ASTM D-149
Breakdown Voltage		13.0 kV	ASTM D-149
Thermal Conductivity		0.120 W/mK	ASTM E-1530

REV: 6/10/2024