Battery Thermal Management Materials

Fenner | High-Tech Coated Fabrics

Fenner's TMM materials are made utilizing silicones and can be customized for various high heat functions within a battery where thermal management is required.

Thermal Interface Pad

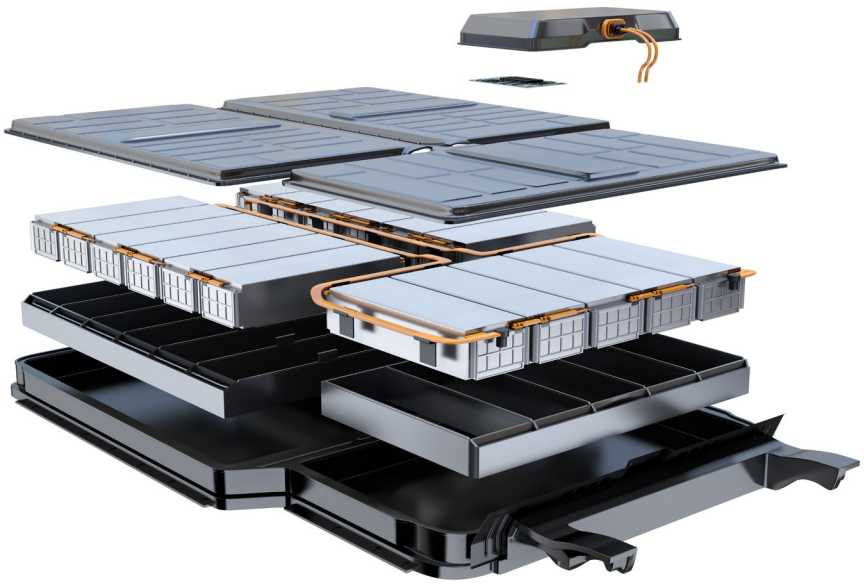
Manufactured utilizing a custom developed unreinforced silicone our Thermal Interface Pad is designed to provide a thermal transfer path between the battery and cooling plate to dissipate heat build up in addition to protecting the battery cell from impact, vibration, swelling, and thermal runaway.

ADVANTAGES:

Ease of Installation

Flexibility and Compression

Safety Certified
UL94 V0 Fire Rating



EXAMPLE CUSTOMER SPEC

Material Property	Value
Thermal Conductivity (W/m.K)	2.5
Dielectric Strength (kV/mm)	20
Compression Set (%)	5
Specific Gravity (g/cm^3)	2
Temperatures (°C)	180°C (356°F)
Operating Temperatures (°C)	60 (140°F)
Fire Requirement (UL 94)	HB
Hardness (Shore A)	63
Thickness (mm)	3

The values in the table above can be customized to your individual requirements. Talk to us about your specification

CUSTOMIZATION

Fenner has R&D capabilities to develop custom, silicone formulations to meet specifications for compression set, thermal conductivity, low specific gravity, resistance to electrical conductivity, material thickness, weight, pliability, and color

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Thermal Shield Material

Acting as an insulation layer between the module and cell, our thermal shield material combines a flame retardant silicone with a ceramic reinforcement to ensure temperature resistance up to 1200°C (2192°F).

CAPABILITIES

- **Dielectric Isolation:** The materials dielectric isolation properties protects components from electrical discharge
- **Thermal Runaway Management:** Utilize our thermal shielding to resist thermal runaway between cells

Material Property	
Thickness	.016" +- .002" (0.40+-0.00508cm)
Weight	11.2 oz/sqyd
Thermal Conductivity	Low
Dielectric Isolation	✓
Breakdown Voltage	1000V
Operating Temperature During Thermal Management	~1000-1200°F ~538-649°C
Permeability	Very Low

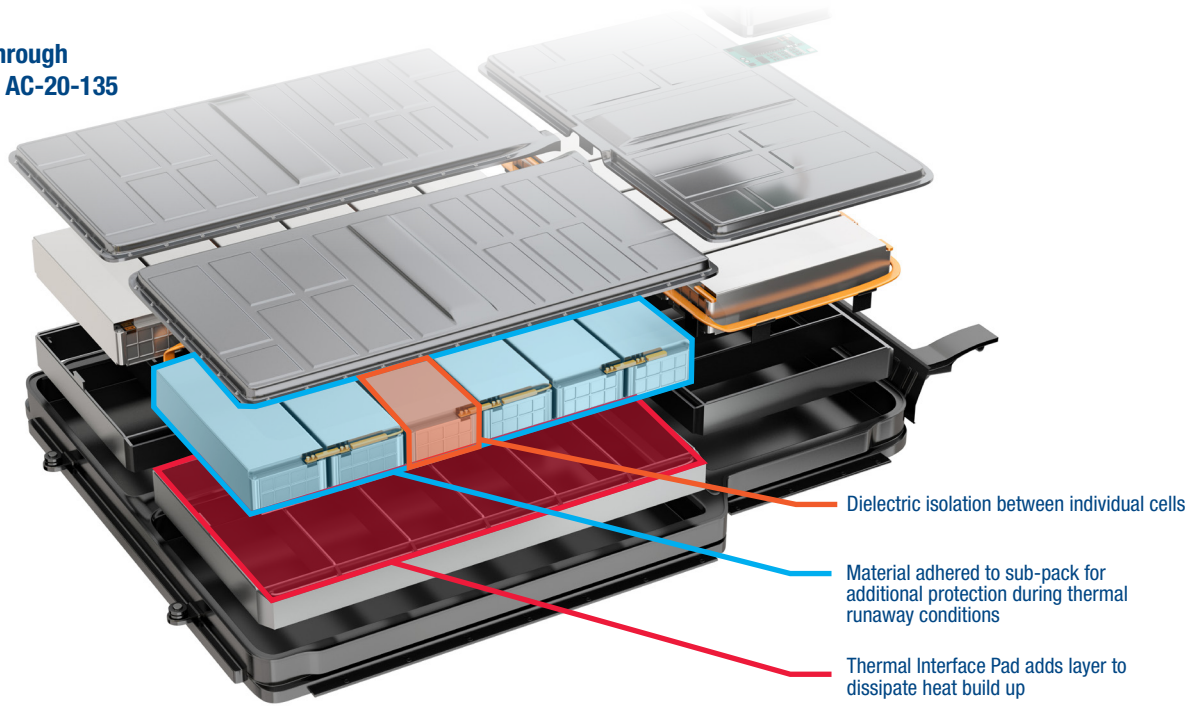
ADVANTAGES:



Customizable | **Low Permeability** | **Pliability**

KEY TEST:

Meets FAA burn through requirements and AC-20-135



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