

Technical Data Sheet: ZSF-TI15

Thermal Insulation Silicone Foam



ZSF-TI15 is a silicone foam with ultra-high temperature ($> 600^{\circ}\text{C}$) thermal insulation. At low temperature ($< 200^{\circ}\text{C}$), it has excellent elasticity, flexibility, compressibility and ultra-low density make it have the functions of buffering, thermal insulation and absorbing structural tolerance. At ultra-high temperature, it can quickly phase change and isolate thermal diffusion, which has excellent performance of thermal insulation. It is often used in energy storage units and power battery cells to delay the spread of thermal runaway.

Silicone Foam - - - - -



Characteristics

- Excellent thermal insulation performance in high temperature ($600^{\circ}\text{C} \sim 1300^{\circ}\text{C}$) environment
- Excellent flame retardant performance
- Microporous structure, ultra-low density
- Super high elasticity in the temperature range of -55 to 200°C

Applications

- Suitable to be used as buffer and thermal insulation pad between pouch cells
- Module insulation pad
- As thermal pad between the PACK and the car body

Properties

Properties	ZSF-TI15	Standard
Colour	Black	-
Standard Thickness (mm)	1.0/1.5/2.0/3.0/4.0	ASTM D374
Density (kg/m^3)	430	ASTM D1056
Tensile Strength (kPa)	680	ASTM D412
Elongation at Break (%)	85	ASTM D412
Compression Force Deflection at (kPa) 10% 20% 30% 40% 50%	86 143 197 280 430	ASTM D1056
Flame Resistance	V-0	UL-94
Thermal Insulation (5mins at 600°C) ($^{\circ}\text{C}$)	140 (2mmT)	-
Thermal Conductivity ($\text{W}/(\text{m.K})$)	0.089	ASTM C518
Dielectric Strength (kV/mm)	≥ 7.0	ASTM D149
Recommended Temperature ($^{\circ}\text{C}$)	$-55 \sim 200$	-

Remark: Technical Data Sheet reflect the average performance of products based on data from controlled standard testing environments and engineering experience but are not guaranteed. User should independently determine the suitability of this material for their specific purpose, assume all risk and liability associated with such use.