TC-500 Ceramifiable Silicone Foam

TAIYALUCK



Product Description

TC-500 is a ceramic silicone foam material. At room temperature, TC-500 has all the characteristics of silicone rubber, such as excellent resilience, good weather resistance, water resistance and long-term stability. TC-500 can be ceramized at high temperature, and can form a hard shell with self-supporting structure after flame combustion, which plays a good role of insulation, fire insulation and fire prevention. TC-500 can be combined with the substrate for integrated production, which is the ideal choice for flame resistant and fire-retardant foam in railway transportation, industrial environment and electronic equipment.

Features and Advantages

- Soft fit to provide good padding and make up for tolerances
- Long term withstand 800 ℃ flame temperature without burning
- Stable performance in extreme environments such as ultraviolet rays, ozone, extreme temperatures
- UL94 V-0 level of flame retardant properties
- Compliance with smoke, fire and toxicity requirements

Typical Application

- Heat insulation and buffering between cells
- Fireproof filler for battery pack
- Other fireproof sealing and heat insulation applications

Product Specification

- Substrate: No substrate or with customized substrate
- Roll form: Product size can be customized according to customer requirements
- Shape: Can be die cut into various shapes
- Adhesive: No adhesive, single-sided or double-sided adhesive

Storage and Transportation

- Store in original packaging at room temperature
- Keep out open flames
- Handling and transportation as general chemicals
- Non-toxic and non-dangerous

Shelf-life

- Without Adhesive: 10 years
- With Adhesive: According to the type of adhesive

The true and reliable data information contained in this information is intended to assist you in the design of the use of the TAIYA silicone foam, based on the scope of application of the product determined by our current cognition and experience, unintentionally and does not constitute any warranty, express or implied, including any warranties of merchantability to the commodity, fitness for special purposes, and does not guarantee that the user can achieve the results shown in this data for a particular purpose. For applications outside the scope, or for use under different conditions and environments, the resulting results will not be liable. Therefore, we strongly recommend that the user determine the suitability of the product before use.

Release date: 2024-11-01

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Product Physical Properties

Properties	Test Method	Typical Value
Product	/	TC-500
Color	Visual	White, Black
Density (kg/m^3)	ASTM D1056	500
Thickness (mm) Tolerance (%)	ASTM D374/D374M /	1~5 ±10
Compression Set (%) (max, 50%, 100℃, 22h)	ASTM D1056	<5
25% Compression Force Deflection (kPa)	ASTM D1056	180
Tensile Strength (kPa)	ASTM D412	600
Elongation at Break (%)	ASTM D412	40
Tear Strength (N/mm)	ASTM D624	1.4
Water Absorption (%)	Internal	3
Thermal Conductivity (W/(m·K))	ASTM E1461	0.15
Volume Resistivity (Ω•cm)	ASTM D257	>10^{14}
Burning Test (1000℃, 10min)	Internal	No crack
Flame Resistance	UL 94	V-0
UL Yellow Card File Number	/	E499089
Recommended Temperature (℃)	SAE J-2236	-55~200

Note: The above data is the average of the overall test, and we can be contacted for more product information.

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