

# FUTUREWAY® TIF-25

## Thermal Insulation Silicone Foam

FUTUREWAY® TIF-25 is a silicone foam material with ultra-high temperature thermal insulation function with a new silicone technology. At the low temperature (<200°C), TIF-25 has excellent resilience, flexibility, compressibility and ultra-low density so that it has the functions of cushioning, thermal preservation and absorbing structural tolerances. At the ultra-high temperature (>600°C), it can inhibit heat diffusion, isolate high temperature to protect sensitive structures. It can be used as high temperature insulation and thermal protection materials for energy storage units and EV battery structures.



### Features & Benefits

- Excellent thermal insulation performance under high temperature (600°C-1300°C) environment
- Excellent flame retardant performance
- Ultra-low density
- Super high elasticity in the temperature range of -55-+200°C
- Self-adhesive and does not need PSA

### Typical Applications

- Buffer and thermal insulation pad between pouch cells
- The thermal pad between the PACK and the car body

### Services

- Available with a pressure sensitive-adhesive on one or two sides
- Provide cutting, splicing and other processing services

### Use

For PSA options, surfaces must be clean and free of oil, grease, moisture, dust and dirt. Isopropyl alcohol is good for cleaning the surface.

Statement: The information contained in this data sheet is intended to assist you in the design of Futureway materials. It is not intended to and does not create any explicit or implicit guaranties, including any guaranty of marketability of the goods and for special purposes. It is also not guaranteed that users can achieve the results shown in the technical specifications of this material in specific applications. They will change with different application situations, such as equipment type, environmental conditions, process conditions, etc. Users should determine the suitability of Futureway materials for each application.

## Typical Properties

Property	Unit	Test Method	Typical Value	
Physical				
Color	-	Visual	Black	
Surface Finish	-	-	Double Smooth/ One Side Rough And One Side Smooth	
Thickness	mm	Thickness Gauge	1.5/2.0/3.0	
Density	kg/m³	ASTM D1056	330	
Tensile Strength	kPa	ASTM D412	370	
Elongation	%	ASTM D412	70	
Compression Set	%	ASTM D1056 100°C/22hrs/50%	1	
Compression Force Deflection	kPa	ASTM D1056	10%	32
			20%	50
			25%	67
			30%	75
			40%	113
			50%	177
Flammability				
Flame Resistance	-	UL 94	V-0	
Electrical & Thermal				
Dielectric Strength	kV/mm	ASTM D149	≥ 3.5	
Thermal Conductivity	W/(m·K)	ASTM C518	0.076	
Thermal Insulation (600°C @ 5 min)	°C	Internal	190 (2 mm T)	
Temperature Range	°C	SAE J2236	-55 to +200	

### Notes:

\*Typical value is based on historical data. Please note the frequency of testing varies.

\*\*Additional industry specifications are also available. All other properties are based on industry standard guidelines.

Statement: The information contained in this data sheet is intended to assist you in the design of Futureway materials. It is not intended to and does not create any explicit or implicit guaranties, including any guaranty of marketability of the goods and for special purposes. It is also not guaranteed that users can achieve the results shown in the technical specifications of this material in specific applications. They will change with different application situations, such as equipment type, environmental conditions, process conditions, etc. Users should determine the suitability of Futureway materials for each application.

**Usable Life & Storage**     10 years after the date of manufacture when stored in original packaging at temperatures up to 35°C and 70% relative humidity(see applicable data sheets for pressure-sensitive adhesive option).

**Packaging Information**     Master roll size: 914mm width. Length varies with thickness.  
Special thickness and roll sizes also available.

Statement: The information contained in this data sheet is intended to assist you in the design of Futureway materials. It is not intended to and does not create any explicit or implicit guaranties, including any guaranty of marketability of the goods and for special purposes. It is also not guaranteed that users can achieve the results shown in the technical specifications of this material in specific applications. They will change with different application situations, such as equipment type, environmental conditions, process conditions, etc. Users should determine the suitability of Futureway materials for each application.