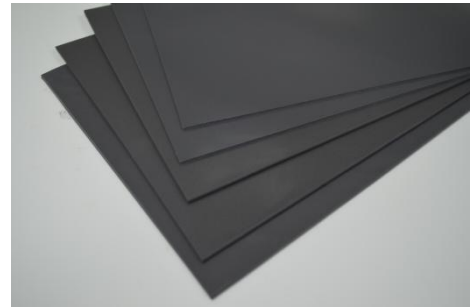


FUTUREWAY® CM-90

Extra Firm Silicone Sponge for Prismatic Cells

FUTUREWAY® CM-90 is a new type of silicone sponge material developed by Futureway which combines the characteristics of prismatic power cells to solve the elastic buffer. It has excellent resistance to environmental aging, wide compressibility range and multiple compression. The high elastic retention ability and excellent flame retardant properties are unmatched by other elastomer materials. This product design is fully integrated with the new energy industry specifications and application requirements, providing a longer charge and discharge life and higher security for the battery pack.



Features & Benefits

- Long-term mechanical performance retention after compression, especially in alpine and hot summer environments
- UV, ozone and extreme temperature resistance make the material more stable in complex environments
- Meet the stringent UL 94 V-0 flame retardant requirements and provide adequate protection for battery pack safety
- Apply to GB 38031-2020 Electric vehicles traction battery safety requirements
- The CTP structure design suitable for prismatic cell module-less PACK provides better elastomer selection for automatic assembly of PACK, system energy density increase and cost reduction

Typical Applications

- Prismatic cell cushion

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.

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Typical Properties

Property	Unit	Test Method	Typical Value
Physical			
Color	-	-	Gray
Surface Finish	-	-	Double Smooth
Thickness	mm	-	0.4-4.0
Hardness	Shore A	ASTM D2240	52±5
Density	g/cm ³	ASTM D1056	1.3
Tensile Strength	MPa	ASTM D412	3.0
Elongation	%	ASTM D412	120
Shear Strength	MPa	ASTM C273/C273M	1.2
Compression Force Deflection	MPa	ASTM D1056	10%
			20%
			30%
			40%
Tear Strength	kN/m	ASTM D624	3.8
Water Absorption	%	ASTM D1056	< 5
Flammability			
Flame Resistance	-	UL 94	V-0 (T ≥ 2 mm)
Electrical & Thermal			
Dielectric Strength	kV/mm	ASTM D149	3.5
Thermal Conductivity	W/(m·K)	ASTM D5470	0.15
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.

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Standard Thickness Tolerances

Nominal Thickness (mm)	Tolerance (mm)
0.4	± 0.1
1.0, 1.2, 1.5	± 0.2
2.0, 3.0	± 0.3
4.0	± 0.4

Slit Material and Tape (PSA) Width Tolerances

Nominal Width (mm)	Tolerance (mm)
$W \leq 20$	± 1.0
$20 < W \leq 40$	± 1.5
$40 < W \leq 100$	± 2.0
$100 < W \leq 450$	± 5.0

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: 914 mm width. Length varies with thickness.
Special thickness and roll sizes also available.

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