

Symel Sponge Silicone Sponge Tube & Extrusion

Overview and General Properties

Symel Sponge is our range of expanded silicone sponge that has a closed cell structure with a smooth outer wall.

It offers excellent thermal stability to withstand the extremes of temperature from -50°C to 250°C , resistance to UV and Ozone and also an excellent compression set of 15% typical.

This makes the product particularly suited to demanding temperature applications that require a soft compressible material and is commonly used in environmental shields, electrical and automotive gaskets across a variety of markets.



Density

Silicone Sponge is available in four standard densities;

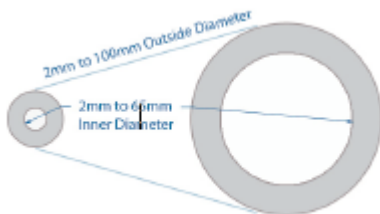
- P10 soft,
- P16 medium
- P24 firm
- P33 extra firm

As part of our Premium Service we can additionally offer tailored grades and densities on request.

Options

- Our product can be provided on spools.
- We can produce in a range of standard colours and also offer a colour matching service.
- We can also provide self adhesive backing and fabric finishes to our products.

Sizes



Properties

- Excellent moisture resistance.
- -50°C up to $+250^{\circ}\text{C}$. Excellent temperature resistance.
- Resistance to UV/oxidation.

From our standard range we can produce sizes from 2.0mm to 100mm and the majority of our range (up to 70mm dia.) can be produced to the tightest ISO 3302 high precision tolerance.

We have an enviable level of experience and track record at providing custom densities and can produce practically any shape that you require.

All information shown, including illustrations is believed to be reliable. Users, however, should independently evaluate the suitability of the product for their application. Sleeve It makes no warranties as to the accuracy or completeness of the information and disclaims any liability regarding its use. In no case will Sleeve It be liable for any incidental, indirect or consequential damages arising from the sale, resale, use or misuse of the product. Sleeve It specifications are subject to change without notice. In addition Sleeve It reserves the right to make changes in materials and processing, without notification to the buyer, which do affect compliance with any applicable specification.



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General Characteristics

Properties	P10 (Soft)	P16 (medium)	P24 (firm)	P33 (extra firm)	Test
Density (Imperial)	10 lbs/ft ³ (+/- 4)	16 lbs/ft ³ (+/- 4)	24 lbs/ft ³ (+/- 4)	33 lbs/ft ³ (+/- 4)	BS EN ISO 845
Density (Metric Kg/m ³)	160Kg/m ³ (+/- 65)	255Kg/m ³ (+/- 65)	390Kg/m ³ (+/- 65)	530Kg/m ³ (+/-65)	BS EN ISO 845
Density (Metric g/cm ³) ^{*1}	0.16g/cm ³ (+/-0.06)	0.25g/cm ³ (+/-0.06)	0.39g/cm ³ (+/-0.06)	0.53g/cm ³ (+/-0.06)	BS EN ISO 845
Hardness ^{*2}					
Shore OO	35 (+/-5)	47 (+/-5)	68 (+/- 5)	83 (+/- 5)	ASTM D2240
Shore A	<5	6 (+/-3)	18 (+/-4)	32 (+/-10)	
Elongation at break (%) 10mm thick	200	215	225	245	BS ISO 37
Compression set (%) ^{*1} 50 % compression for 22 hours at 70°C 10mm thick sample	15	15	15	10	EN ISO 1858
Compression Deflection (25%) typical kpa	25	50	75	100	BS ISO 37
Tensile strength (Mpa) 10mm thick	0.5	0.65	1.05	1.60	BS 4443
Tensile strength (newtons) 10mm thick sample	50	65	110	160	
Temperature Max (°C)					
Continuous	200	200	200	225	
Intermittent	200	200	200	225	
Temperature (Min) °C	-50	-50	-50	-50	
Toxicity NES 713	14	14	14	14	NES 713 Issue 03
Smoke Index	46	46	46	46	NES 711 Issue 02
Burn rate	0.03mm/s	0.03mm/s	0.03mm/s	0.03mm/s	BS 4735: 1974
Thermal Conductivity (W/m.K)	0.0695 W/m.k	0.0695 W/m.k	0.0695 W/m.k	0.0695 W/m.k	

^{*1} Compression set and density may vary depending upon product size and thickness

^{*2} Shore A data is provided as an approximate indication, due to testing limitations

Tolerances

Size	Tolerance ISO 3302-1: 1996	
	Standard E2	High Precision E1
0 to 1.5	+/- 0.25	+/- 0.15
>1.5 to 2.5mm	+/- 0.35	+/- 0.20
>2.4 to 4.0mm	+/- 0.40	+/- 0.25
>4.0 to 6.3mm	+/- 0.50	+/- 0.35
>6.3 to 10.0mm	+/- 0.70	+/- 0.40
>10.0 to 16.0mm	+/- 0.80	+/- 0.50
>16.0 to 25.0mm	+/- 1.00	+/- 0.70
>25.0 to 40.0mm	+/- 1.30	+/- 0.80
>40.0 to 63.0mm	+/- 1.60	+/- 1.00
>63.0 to 70.0mm	+/- 2.00	+/- 1.30
>70.0 to 80.0mm	+/- 2.00	
>80.0 to 100mm	+/- 3.00	

Please note our information is based on lab tested samples. Technical data is provided in good faith, but without warranty.

End users should check to ensure our products are suitable for their intended use.

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