



SIL33 SILICONE FOAM

MATERIAL SPECIFICATION SHEET

Applications

Cellular silicone rubber is suitable where a soft, easily deformed rubber is required, for example, for high temperature seals and gaskets. The sheets and punched parts are all available with pressure sensitive adhesive backing to ease assembly.

Thermal Properties

The range is suitable for continuous use at temperatures up to +200°C. They are also suitable for use at temperatures as low as -60°C.

Chemical Composition

This range of polydimethylsiloxane have been “free-blown” with a chemical blowing agent and cross-linked with an organic peroxide. The cellular structure is produced without the use of CFC’s thus making less damaging to the environment.

General Information

Meets the flammability requirements of FAR 25/JAR25/CS 25 Appendix F, Part 1(a)(1)(iv) and (a)(1)(v) horizontal flammability test and Automotive Standard Part 571FMVSS302.

Closed Cell – can be compressed to meet IP 65 Brittle Point - 80°C ASTM D746

Limited Oxygen Index 24.0% BS 2782 Part 1

Thermal Conductivity $6.4 \times 10^{-2} \text{ W.m}^{-1}.\text{K}^{-1}$ BS 874 Part 2 Radiation

Resistance $>10^5$ Grays (10^7 Rads) typical

Moisture Absorption

The range has a very low degree of moisture absorption. Mechanical properties shows little change even after long periods of immersion.



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Pigmentability

The product range is available in off-white as standard. Other colours, such as red oxide, are available.

Environmental Resistance

Silicone rubber has excellent resistance to ozone, oxidation, ultraviolet light, corona discharge, cosmic radiation, ionising radiation and weathering in general. Typical radiation resistance is greater than 10 grays (greater than 10 rads).

Property	Units	Specification Limits	Typical Value	Test Method
Apparent Density	kg/m ³ lb/ft ³	530 ± 50 33.0 ± 3.1	550 34.3	BS EN ISO 845
Hardness	Shore OO Shore A	-	80 ± 5 30	ASTM D 2240
Compression Stress, 40% strain	kPa	450 ± 150	470	BS EN ISO 3386 Part 1 & 2
Tensile Strength	MPa psi	1.5 min 217	2.0 290	BS EN ISO 1798
Elongation to failure	%	100 min	130	BS EN ISO 1798
Compression Set 50% compression, 24 hours recovery				
22 hrs @ 70°C (158°F)	%	15 max	9.5	BS EN ISO 1856
22 hrs @ 100°C (121°F)	%	15 max	12.0	BS EN ISO 1856

* Density measured on 25mm diameter cord sample. The density of samples of different sizes will be different from that stated here.

** Hardness measured 10mm thick samples. At less than 10mm the measured hardness will increase with density. The Shore A values are provided as a guide line for comparison to solid materials and as such are not designed for use in specifications.

*** Compression set measured on samples as defined in BS EN ISO 3386. The compressive stress on samples of different dimensions, especially thickness may vary from that quoted here.



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