



Material

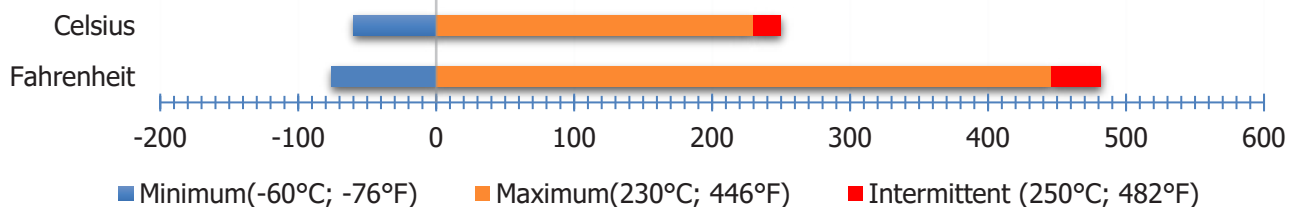
Closed Cell Silicone Sponge



Available Grades

SIL10, SIL16, SIL20, SIL24,
SIL33

Temperature Range



General Information

The material should not be compressed by more than 50% of its original thickness, as the cells may break under such compression. The maximum compression recommended is 30% of initial thickness. Sealing with less than 30% compression helps reduce compression set and promotes product longevity.

The density range in white has been approved by the WRAS (Water Regulations Advisory Service) for use in contact with potable water at temperatures up to 85°C (185°F).

These products meet the flammability requirements of FAR 25/JAR 25/CS 25 Appendix F, Part 1, (a)(1)(iv) and (a)(1)(v) horizontal flammability test and Automotive Standard PART 571FMVSS302

The sponge is closed cell with low water absorption and dust ingress protection up to IP65, subject to design.

Environmental Resistance

Silicone rubber products have an excellent resistance to:

- Ozone
- Oxidation
- Ultraviolet light
- Corona discharge
- Cosmic radiation
- Ionising radiation
- Weathering in general

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Availability Format

SHEETING

- Supplied in rolls or individual sheets
- Widths up to 1000mm
- Pressure sensitive adhesive backing
- Punched/Water jet-gaskets
- Full range of standard colours
- Capability to colour match

Typical Applications

- Automotive
- Electronics
- Energy
- Construction
- Heating and Ventilation (HVAC)
- Industrial
- Insulations
- Lighting and Marine

Accreditations

- FAR 25/JAR 25/CS 25 Appendix F, Part 1, (a)(1)(iv)(a)(1)(v) horizontal flammability test
- If tested would meet UL94HB
- Automotive Standard PART 571FMVSS302
- REACH compliant and ROHS compliant

General Characteristics

| Test | Result | Standard |
|-----------------------|---|----------------|
| Brittle Point | -80°C (-112 °F) | ASTM D746 |
| Limiting Oxygen Index | 24.0 % | BS 2782 Part 1 |
| Thermal Conductivity | $6,4 \times 10^{-2} \text{ W.m}^{-1}.\text{K}^{-1}$ | BS2782 Part 2 |
| Radiation Resistance | $>10^5$ Grays (10^7 Rads) typical | |

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Mechanical Properties

| Sheeting | | SIL10 | SIL16 | SIL20 | SIL24 | SIL27 | SIL33 | |
|--|---|---------------|---------------|---------------|---------------|---------------|---------------|--|
| Property | Units | Typical Value | Typical Value | Typical Value | Typical Value | Typical Value | Typical Value | Test Method |
| Density * | kg.m ³ lb.ft ³ | 200 12.5 | 250 15.6 | 320 20 | 400 25 | 460 28.7 | 550 34.3 | BSENISO 845 ASTM D3574 |
| Hardness ** | Shore OO Shore A | 35 ±5 <5 | 42 ±5 5 | 55 ±5 15 | 65 ±5 17 | 70 ±5 24 | 80 ±5 30 | ASTM D2240 |
| Compression Stress 40% Strain *** | kPa PSI | 50 4.6 | 90 6.4 | 120 8.3 | 165 11.9 | 230 17.4 | 470 34.8 | BSENISO 3386 Part 1,2 ASTM D1056 |
| Tensile Strenght | MPa PSI | 0.6 87 | 0.6 87 | 0.75 108 | 0.75 108 | 1.5 217 | 2.0 290 | BSENISO 1798 ASTM D412 |
| Elongation to failure | % | 140 | 145 | 120 | 120 | 130 | 130 | BSENISO 1798 ASTM D412 |
| Compression Set 50% Compression 24hrs Recovery, 22 hrs 70°C (158°F) | % | 15.0 | 12.0 | 12.0 | 10.0 | 10.0 | 9.5 | BSENISO 1856 |
| Compression Set 50% Compression 24hrs Recovery, 22 hrs 100°C | % | 18.0 | 14.5 | 14.0 | 12.0 | 12.5 | 12.0 | BSENISO 1856 |
| Water Absorption | % | <5 | <5 | <5 | <5 | <5 | 2 | ASTM D1056 |

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