

Technical Data Sheet

Silicone Rubber Sponge

SIL15 FDA Compliant (Extrusion Grade)

Material

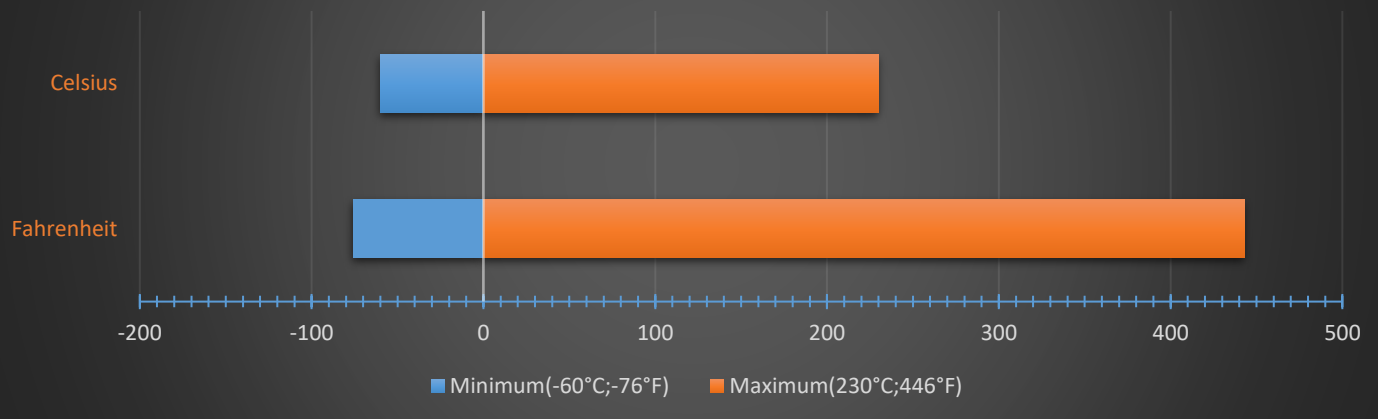
Mainly closed cell Silicone Sponge

Available Grades

SIL15 FDA

Temperature

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.

Our SIL15 FDA range is in compliance with the American Food and Drugs Administration (FDA) 21 CFR 177-2600 & 175.300 it is as well compliant to German BfR Recommendation XV on silicone Food Contact. EU1935/2004 compliant.

These products meet the flammability requirements of FAR 25/J AR 25/ CS25 Appendix F, Part 1, (a)(1)(v) horizontal flammability test and Automotive Standard PART 571FMVSS302.

Can be formulated to meet AMS and ASTM sponge specifications.

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

This information and our technical advice, whether verbal, in writing or by way of trials, is given in good faith but without warranty. This also applies where proprietary rights are involved. Our advice does not release you from the obligations to check its validity and to test our products as to their suitability for their intended use. The storage, application and use of our products are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with our General Conditions of Sale. The information contained within this data sheet is subject to change without notice. Issue date 01.01.2019.

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Environmental Resistance

Silicone rubber products have an excellent resistance to:

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

Availability Format

EXTRUSIONS

- ✓ Cord, section, strip, profiles
- ✓ Joined rings and gaskets
- ✓ Pressure sensitive adhesive backing
- ✓ Full range of standard colours
- ✓ Capability to colour match

Typical Applications

- ❖ Automotive
- ❖ Electronics
- ❖ Energy
- ❖ Construction
- ❖ Heating and Ventilation (HVAC)
- ❖ Industrial
- ❖ Insulations
- ❖ Lighting and Marine
- ❖ High and Low temperature gaskets and seals
- ❖ Food sensitive and Food Processing
- ❖ Medical and Pharmaceutical

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Mechanical Properties

EXTRUSIONS		SIL 15	
Property	Units	Typical Value	Test Method
Density *	kg.m ³ lb.ft ³	350 21.8	BSENISO 845 ASTM D3574
Hardness **	Shore OO Shore A	50-60 ±5 <7-10	ASTM D2240
Compression Stress 40% strain ***	kPa PSI	78 11.3	BSENISO 3386 part 1, 2
Tensile Strength	MPa PSI	0.45 65	BSENISO 1798 ASTM D412
Elongation to failure	%	140	BSENISO 1798 ASTM D412
Compression Set 50% Compression 24hrs Recovery. 22hrs @ 70°C (158°F)	%	<1	BSENISO 1856
Compression Set 50% Compression 24hrs Recovery. 22hrs @ 100°C (212°F)	%	<1	BSENISO 1856

In-house capabilities for extensive industry specific testing available on request

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

**Hardness measured on 10mm thick samples. At less than 10mm the measured hardness will increase with density.

***Compression Stress measured on samples as defined by BSENISO 3386. The compressive stress on samples of different dimensions, especially thickness, may vary from that quoted here. For further information about physical properties for other sample sizes, please contact the technical department.

It is not possible to perform a Shore A hardness test on sponge material. These values are provided as a guideline for comparison to solid materials and as such are not designed for use in specifications.

For further information about physical properties of other sample sizes, please contact the technical department.

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General Characteristics

Test	Result	Standard
Brittle Point	-80°C (-112 °F)	ASTM D746
Limiting Oxygen Index	24.0 %	BS 2782 Part 1
Thermal Conductivity	$6.1 \times 10^{-2} \text{ W.m}^{-1} . \text{K}^{-1}$	BS 874 Part 2
Radiation Resistance	>10 ⁵ Grays (10 ⁷ Rads) typical	

Accreditations

- ❖ American Food and Drugs Administration (FDA) 21 CFR 177-2600
- ❖ Directive EC 1935/2004
- ❖ FAR 25/JAR 25/CS 25 Appendix F, Part 1, (a)(1)(iv)(a)(1)(v) horizontal flammability test
- ❖ Automotive Standard PART 571FMVSS302
- ❖ EU 1935/2004 compliant

Additional Information

- ❖ Platinum cured
- ❖ Smooth and dry surface
- ❖ Well finished edges