

TECHNICAL DATA SHEET

Flame Retardant Cellular Silicone Elastomer – Extrusions & Sheeting

Grades: SE510 FR, SE515FR, SE 524FR and SE 533FR

Temperature Range: -60°C to 230°C

AVAILABILITY

The FR range of cellular silicone elastomers are available as sheeting, profile extrusions, jointed rings, self-adhesive backed, strip and punchings. They are particularly suited to use in high temperature seals and gaskets, where a soft, easily deformed rubber is required and where public safety is critical. There is a range of standard colours available and Silicone Engineering has the capability to colour match to customer requirements. Sheeting is available in standard rolls of width 1m; other widths can be produced upon request.

** Other specific sponge grades available include General purpose grades, SE515 & SE524 AFS1682, AMS3195, AMS3196 & BMS 1-60**

SPECIFICATIONS

These products meet the flammability requirements of FAR 25/JAR 25/CS 25 Appendix F, Part 1, (a)(1)(i), (a)(1)(ii) vertical and (a)(1)(iv), (a)(1)(v) horizontal flammability tests.

The sponge is predominately-closed cell with low water absorption

GENERAL CHARACTERISTICS FOR SILICONE RUBBER

Brittle Point	-80°C (-112 °F)	ASTM D746
Limiting Oxygen Index	24.0 %	BS 2872 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	

Environmental Resistance

Silicone rubber products have an excellent resistance to ozone, oxidation, ultraviolet light, corona discharge, cosmic radiation, ionising radiation and weathering in general.

Silicone rubber products produce very low levels of toxic fume when burnt

Other grades of silicone rubber available from Silicone Engineering are:

- * General Purpose Grades
- * Cellular silicone Products
- * High Temperature Grades
- * High Tear Grades
- * Flame Retardant Grades
- * Low Combustion Hazard Grades
- * Custom Compound

This wide range of grades and production capability in silicone rubber is only available from



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MECHANICAL PROPERTIES

Property	Units	SE510 FR		SE515 FR		SE524 FR		SE533 FR		Test Method
		Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	
*Density	kg.m ⁻³	200 ±40	195	250 ±40	250	400 ±40	400	530 ± 40	550	BSENISO 845
**Compression Stress 40% strain	kPa	50 ±40	50	90 ± 40	6.15	160 ± 40	160	580 ± 150	584	BSENISO 3386 part1,2
Compression Set 50% compression 22 hours @ 70°C 24 hours recovery	%	20 max	16	20 max.	20	15 max.	10	15 max	10	BSENISO 1856

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

**Compression Stress measured on samples as defined in 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.