



## **TECHNICAL DATA SHEET**

### **Flame Retardant Cellular Silicone Elastomer**

**Grades: SE510FR UL94V0 SE515FR UL94V0 SE520FR UL94V0 & SE524FR UL94V0**

**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. Sheeting is available in standard rolls of width 1m and length 10m; other widths or lengths can be produced upon request. The scope of the UL approval for these products limits the minimum dimensions and colours that can be manufactured, for further information please contact the Silicone Engineering sales team.

#### **SPECIFICATIONS**

These products have been specifically formulated for and hold approval to the flammability requirements of the UL94 V0 specification. The UL file number for these materials is E235077. As V0 is the most demanding of the UL94 vertical burn tests, these grades may also be used in applications where V1 or V2 rating is required. 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.

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 \*

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



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## MECHANICAL PROPERTIES

Property	Units	SE510FR UL94 V0		SE515FR UL94 V0		SE520FR UL94 V0		SE524FR UL94V0		Test Method
		Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	
*Density	kg.m <sup>-3</sup>	160 ± 30	169	220 ± 30	218	320 ± 30	325	400 ± 40	392	BSENISO 845 *25 mm sample *3 mm sample
**Compression Stress 40% strain	kPa	360 ± 60	310	400 ± 60	404	450 ± 80	464	550 ± 60	555	
Compression Set 50% compression 22 hours @ 70°C 24 hours recovery	%	30 ± 20	14.0	70 ± 20	68	130 ± 40	138	140 ± 40	155	BSENISO 3386 part 1,2
		20 max.	12	15 max	10	15 max	10	15 max	10	BSENISO 1856

\*The density of sponge varies with the thickness of the product. As the thickness decreases the density increases in addition as the density increases the stiffness of the product increases. For more information relating to the apparent density of any specific thickness and what affect this would have on performance, please contact the technical department.

\*\*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.