

TECHNICAL DATA SHEET

Solid Silicone Rubber – Mouldings & Extrusions

Grades: SE40 SE50 SE60 SE70 & SE80

Temperature Range: -60°C (-76°F) to 230°C (446°F)

AVAILABILITY

The SE range of Silicone Rubbers is available in the form of mouldings and profile extrusions, which can be jointed or self-adhesive backed. They are particularly suited to use in oven door seals and gaskets, and are suitable for use in the food and beverage industry. There is a full range of standard colours available, including transparent, and Silicone Engineering has the capability to colour match to customer requirements.

SPECIFICATIONS

Translucent, White, Blue and Red Iron Oxide variants contain only ingredients that are listed by the American Food and Drugs Administration (FDA) under the 21 CFR number 177-2600.

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 tests.

GENERAL CHARACTERISTICS FOR SILICONE RUBBER

Brittle Point	-80°C (-112 °F)	ASTM D746
Limiting Oxygen Index	24.0 %	BS 2872 Part 1
Thermal Conductivity	0.24 W.m ⁻¹ .K ⁻¹	VDE 0304
Radiation Resistance	>10 ⁵ Grays (10 ⁷ Rads) typical	
Dielectric Strength	23 kV.mm ⁻¹	VDE 0303
Dielectric Constant	2.9	VDE 0303
Dissipation Factor @ 50c/s	3x10 ⁻⁴	VDE 0303
Volume Resistivity	3x10 ¹⁵ Ω.cm	VDE 0303

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

Note: During manufacture, and after initial curing, these products are post cured for 4 hours @ 200°C.

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 Compounds

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



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MECHANICAL PROPERTIES

Property	Units	SE40		SE50		SE60		SE70		SE80		Test Method
		Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	
Hardness	Shore A	40 ±5	40	50 ±5	50	60 ±5	60	70 ±5	70	80 ±5	80	ASTM D2240 DIN 53505
Tensile Strength	MPa	4.0 min.	7.0	5.5 min.	8.0	5.5 min.	7.9	5.5 min.	7.6	5.5 min.	7.8	BSISO 37 DIN 53504 die S1
	Psi	580 min.	1015	798 min.	1160	798 min.	1146	798 min.	1102	798 min.	1131	ASTM D412 die C
Elongation to Failure	%	300 min.	450	250 min.	370	250 min.	340	200 min.	320	200 min.	300	BSISO 37 DIN 53504 die S1 ASTM D412 die C
Tear Strength	N/mm	8.5 min.	10.2	10.0 min.	12.8	12.5 min.	14.2	12.5 min.	14.4	10.0 min.	13.2	BSISO 34-1 method C
	lb/in	48.5 min.	73.1	57.1 min.	81.1	71.4 min.	90.3	71.4 min.	91.4	57.1 min.	82.2	ASTM D624 die C
Compression Set 24 hours @ 150°C	%	35 max.	25	30 max.	15	30 max.	13	30 max.	9	30 max.	19	BS 903 pt A6 type B DIN 53517 type II
		35 max.	22	30 max.	16	30 max.	10	30 max.	10	30 max.	19	ASTM D395 method B type 2

*other information regarding the physical properties of these materials is available on request