



TECHNICAL DATA SHEET

High Tear Solid Silicone Rubber - Sheeting

Grades: KSIL 50 HIGH TEAR, KSIL 60 HIGH TEAR & KSIL 70 HIGH TEAR

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

AVAILABILITY

The KSIL range of Silicone Rubbers have been specifically designed to produce silicone sheeting and can be purchased with adhesive backing. They are particularly suited for use in seals and gaskets where a higher resistance to damage than can be attained with a general purpose silicone elastomer is required, 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. Typical radiation resistance is > 10⁵ grays (>10⁷ rads)

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	KSIL50 HIGH TEAR		KSIL60 HIGH TEAR		KSIL70 HIGH TEAR		Test Method
		Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	
Hardness	Shore A	50 ±5	50	60 ±5	60	70 ±5	70	ASTM D2240 DIN 53505
Tensile Strength	MPa	6.5 min.	8.9	6.5 min.	9.4	6.5 min.	9.2	BSISO 37 DIN 53505 die S1
	psi	942 min.	1291	942 min.	1363	942 min.	1334	ASTM D412 die C
Elongation to Failure	%	300 min.	380	300 min.	476	300 min.	469	BSISO 37 DIN 53505 die S1 ASTM D412 die C
Tear Strength	N/mm	30 min.	39.2	30 min.	46	30 min.	43	BSISO 34-1 method C
	lb/in	171 min.	240	171 min.	285	171 min.	274	ASTM D624 die C
Compression Set 24 hours @ 150°C	%	35 max.	17	35 max.	25	35 max.	28	BS 903 pt A6 type B DIN 53517 type II
22 hours @ 300°F		35 max.	16	35 max.	22	35 max.	24	ASTM D395 method B type 2

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