

Solid Silicone Elastomer Heat & Oil Resistant Rolls

[US]

Grades

kSil™US30 kSil™US40 kSil™US50 kSil™US60 kSil™US70

Specifications

kSil™US range has been tested to and complies with:

AA59588 Grade 2A & 2B,

AMS3301 to AMS3304,

American Food and Drugs Administration (FDA)
21 CFR 177-2600,

BFR XV Empfehlung,

Directive EC 1935/2004

These products also 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 and Automotive Standard PART 571FMVSS302 (thickness: >1.5mm 30-40 Shore A & >0.4mm 50-70 Shore A).

Availability

Mouldings



Rolls



Gaskets



Cables



Extrusions



Compound



Tubing



Temperature Range

-80°F to 446°F
and up to 500°F intermittent

Environment Resistance

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

Availability

- Supplied in continuous roll lengths.
- Widths: 36" & 48" (standard), 60" and 70"
- Pressure sensitive adhesive backing (PSA)
- Punched & Water Jet gaskets.
- Standard colours: Red-Orange, Black, Grey

General Characteristics

Test	Result	Standard
Brittle Point	-112°F	ASTM D746
Limiting Oxygen Index	24.0 %	BS 2782 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	3x10 ⁻⁴	VDE 0303
Volume Resistivity	3x10 ¹⁵ Ω.cm	VDE 0303

Typical Applications

Industrial applications and other general use applications where FDA, AMS and/or AA59588 compliant materials are required

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Mechanical Properties

Property	Units	kSil™US30	kSil™US40	kSil™US50	kSil™US60	kSil™US70	Test Method
		Typical Values	Typical Values	Typical Values	Typical Values	Typical Values	
Specific Gravity	g/cm ³	1.12	1.19	1.21	1.25	1.33	
Hardness	Shore A	30	40	50	60	70	ASTM D2240
Tensile Strength	MPa psi	9.0 1305	9.0 1305	7.5 1088	8.0 1160	8.0 1160	ASTM D412 die C
Elongation to Failure	%	800	550	310	275	300	ASTM D412 die C
Tear Strength	N/mm ppi	18 103	18 103	13 74	15 85	19 108	ASTM D642 die B
Compression Set: 70 hours @ 302°F	%	19	24	12	17	24	ASTM D395 Method B Type 2
Hardness Change after Heat Age for 70 hours @ 437°F	Shore A	+4	+1	+1	+1	+3	ASTM D2240
Tensile Strength Change after Heat Age for 70 hours @ 437°F	%	-12	-6	0	-9	-14	ASTM D412 die C
Elongation to Failure Change after Heat Age for 70 hours @ 437°F	%	-16	-20	-8	-15	-6	ASTM D412 die C
Volume Change after Water Immersion for 70 hours @ 212°F	%	0	0	0	0	0	ASTM D471

Extra Information

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