



Solid Silicone Elastomer Heat & Oil Resistant Rolls

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[US]

Grades

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

Temperature Range

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

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).

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

Mouldings



Rolls



Gaskets



Cables



Extrusions



Compound



Tubing



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.