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Silicone Elastomer range spec

SPECIFICATION DATA SHEET

General Information			
Property	**Test Method**	**Units**	**Value**
Material			General Purpose Silicone Rubber
Available Grades			Shore A 20, 30, 40, 50, 60, 70, 80
Temperature Range (Min)	—	°C / °F	-60°C / -76°F
Temperature Range (Max)	—	°C / °F	230°C / 446°F
Temperature Range (Intermittent)	—	°C / °F	250°C / 482°F

Mechanical Properties									
Property	**Units**	**Grade 20**	**Grade 30**	**Grade 40**	**Grade 50**	**Grade 60**	**Grade 70**	**Grade 80**	**Test Method**
Hardness	Shore A ±5	20	30	40	50	60	70	80	DIN ISO 7619-1
Tensile Strength	MPa (PSI)	10.1 (1464)	8.0 (1160)	9.0 (1305)	9.0 (1305)	10.0 (1450)	10.0 (1450)	7.0 (1015)	ISO 37 type 2
Elongation to Failure	%	979	500	525	450	400	320	215	ISO 37 type 2
Tear Strength	N/mm (lb./in.)	25.0 (142)	16.0 (91)	23 (130)	18 (100)	22 (125)	20 (115)	17 (88.5)	ASTM D624 die B
Compression Set 24 Hrs @ 150°C	%	23	23	25	15	13	9	18	DIN/ISO 815 type B
Compression Set 22 Hrs @ 300°F	%	-	20	22	16	10	10	16	ASTM D395 method B type 2

General Characteristics		
Test	**Result**	**Standard**
Brittle Point	-80°C (-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	3×10^{-4}	VDE 0303
Volume Resistivity	3×10^{15} Ω.cm	VDE 0303

Approvals & Accreditations

- FDA 21 CFR 177-2600 compliant
- BfR (BfR XV Empfehlung) compliant
- EU Directive 1935/2004 compliant
- WRAS approved (Translucent, Blue, White, Red and Black, 40°–70° Shore, up to 85°C)
- FAR 25 / JAR 25 / CS 25 Appendix F, Part 1 (a)(1)(iv) and (a)(1)(v) horizontal flammability test
- Automotive Standard PART 571 MVSS302
- REACH compliant
- RoHS compliant

Environmental Resistance

- Ozone
- Oxidation
- Ultraviolet light
- Corona discharge
- Cosmic radiation
- Ionising radiation
- Weathering in general

The above figures are average values and should be considered as guidelines not specifications. While reasonable care has been taken to ensure that this data is representative, we do not warrant or otherwise guarantee, expressly or impliedly, the suitability, accuracy, reliability or completeness of the information. We recommend evaluation prior to use to ascertain the suitability of the material for the application.