

Overview of materials for Silicone, RTV, Encapsulation Grade

Category : Polymer , Thermoset , Silicone , Silicone, RTV, Encapsulation Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Silicone, RTV, Encapsulation Grade". Each property range of values reported is minimum and maximum values of appropriate MatWeb entries. The comments report the average value, and number of data points used to calculate the average. The values are not necessarily typical of any specific grade, especially less common values and those that can be most affected by additives or processing methods.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Overview-of-materials-for-Silicone-RTV-Encapsulation-Grade.php

Physical Properties	Metric	English	Comments
Density	0.970 - 2.24 g/cc	0.0350 - 0.0809 lb/in ³	Average value: 1.32 g/cc Grade Count:46
Viscosity	200 - 880000 cP	200 - 880000 cP	Average value: 48500 cP Grade Count:44
Linear Mold Shrinkage	0.00200 - 0.0200 cm/cm	0.00200 - 0.0200 in/in	Average value: 0.00756 cm/cm Grade Count:17

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	13.0 - 87.0	13.0 - 87.0	Average value: 48.3 Grade Count:35
Tensile Strength, Ultimate	0.400 - 6.86 MPa	58.0 - 995 psi	Average value: 3.53 MPa Grade Count:29
Tensile Strength, Yield	1.17 - 1.72 MPa	170 - 250 psi	Average value: 1.42 MPa Grade Count:3
Elongation at Break	55.0 - 400 %	55.0 - 400 %	Average value: 153 % Grade Count:24
Elongation at Yield	80.0 - 160 %	80.0 - 160 %	Average value: 110 % Grade Count:3
Penetration P(0), 1/10 mm	55.0 - 200	55.0 - 200	Average value: 103 Grade Count:3
Tear Strength	3.40 - 20.0 kN/m	19.4 - 114 pli	Average value: 6.49 kN/m Grade Count:17

Thermal Properties	Metric	English	Comments
CTE, linear	0.326 - 730 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	0.181 - 406 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	Average value: 238 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ Grade Count:35
Thermal Conductivity	0.146 - 1.10 W/m-K	1.01 - 7.63 BTU-in/hr-ft ² -°F	Average value: 0.334 W/m-K Grade Count:40
Maximum Service Temperature, Air	150 - 300 °C	302 - 572 °F	Average value: 215 °C Grade Count:36
Minimum Service Temperature, Air	-115 - -40.0 °C	-175 - -40.0 °F	Average value: -68.5 °C Grade Count:32

Thermal Properties	Metric	English	Comments
Optical Properties	Metric	English	Comments
Refractive Index	1.39 - 1.42	1.39 - 1.42	Average value: 1.41 Grade Count:12
Transmission, Visible	90.0 %	90.0 %	Average value: 90.0 % Grade Count:12
Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+13 - 1.20e+16 ohm-cm	1.00e+13 - 1.20e+16 ohm-cm	Average value: 1.27e+15 ohm-cm Grade Count:38
Dielectric Constant	2.70 - 4.40	2.70 - 4.40	Average value: 3.34 Grade Count:38
Dielectric Strength	15.7 - 27.0 kV/mm	399 - 686 kV/in	Average value: 20.4 kV/mm Grade Count:44
Dissipation Factor	0.000100 - 0.0700	0.000100 - 0.0700	Average value: 0.00967 Grade Count:44
Processing Properties	Metric	English	Comments
Processing Temperature	25.0 °C	77.0 °F	Average value: 25.0 °C Grade Count:27
Cure Time	180 - 4320 min	3.00 - 72.0 hour	Average value: 1890 min Grade Count:5
	5.00 - 240 min @Temperature 60.0 - 175 °C	0.0833 - 4.00 hour @Temperature 140 - 347 °F	Average value: 41.0 min Grade Count:13
Pot Life	4.00 - 10100 min	4.00 - 10100 min	Average value: 428 min Grade Count:33

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