

Overview of materials for Silicone Foam

Category : Polymer , Thermoset , Silicone , Silicone Foam

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Silicone Foam". 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-Foam.php

Physical Properties	Metric	English	Comments
Density	0.104 - 1.64 g/cc	0.00376 - 0.0592 lb/in ³	Average value: 0.328 g/cc Grade Count:33
Water Absorption	0.200 - 12.0 %	0.200 - 12.0 %	Average value: 3.64 % Grade Count:10
Viscosity	3000 - 55000 cP	3000 - 55000 cP	Average value: 18000 cP Grade Count:5

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	3.00 - 62.0	3.00 - 62.0	Average value: 17.8 Grade Count:7
Hardness, Shore OO	40.0 - 70.0	40.0 - 70.0	Average value: 53.1 Grade Count:4
Tensile Strength, Ultimate	0.0552 - 2.80 MPa	8.00 - 406 psi	Average value: 0.387 MPa Grade Count:15
Tensile Strength, Yield	0.0827 - 0.689 MPa	12.0 - 100 psi	Average value: 0.229 MPa Grade Count:6
Elongation at Break	49.0 - 300 %	49.0 - 300 %	Average value: 107 % Grade Count:22
Compressive Yield Strength	0.00800 - 0.170 MPa	1.16 - 24.7 psi	Average value: 0.0627 MPa Grade Count:19
Compression Set	0.000 - 15.0 %	0.000 - 15.0 %	Average value: 3.14 % Grade Count:7
	0.000 - 10.0 %	0.000 - 10.0 %	Average value: 18.8 % Grade Count:12
	@Temperature 70.0 - 100 °C	@Temperature 158 - 212 °F	
	0.000 - 80.0 %	0.000 - 80.0 %	Average value: 18.8 % Grade Count:11
	@Temperature 70.0 - 100 °C	@Temperature 158 - 212 °F	
	0.000 - 80.0 %	0.000 - 80.0 %	Average value: 18.8 % Grade Count:11
	@Time 79200 - 79200 sec	@Time 22.0 - 22.0 hour	

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.0600 - 0.120 W/m-K	0.416 - 0.833 BTU-in/hr-ft ² -°F	Average value: 0.0851 W/m-K Grade Count:6
Maximum Service Temperature, Air	150 - 280 °C	302 - 536 °F	Average value: 219 °C Grade Count:17
Minimum Service Temperature, Air	-70.0 - -20.0 °C	-94.0 - -4.00 °F	Average value: -55.4 °C Grade Count:17
Brittleness Temperature	-55.0 °C	-67.0 °F	Average value: -55.0 °C Grade Count:5
Flammability, UL94	V-1 - V-0	V-1 - V-0	Grade Count:14
Flame Spread Index	11.5 - 25.0	11.5 - 25.0	Average value: 22.6 Grade Count:10
Smoke Density	1.50 - 50.0 min	1.50 - 50.0 min	Average value: 15.3 min Grade Count:15
Oxygen Index	34.0 - 44.0 %	34.0 - 44.0 %	Average value: 38.7 % Grade Count:6

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000100 - 1.00e+14 ohm-cm	0.000100 - 1.00e+14 ohm-cm	Average value: 7.14e+13 ohm-cm Grade Count:7
Dielectric Constant	1.30 - 1.58	1.30 - 1.58	Average value: 1.39 Grade Count:6
Dielectric Strength	3.50 - 7.48 kV/mm	88.9 - 190 kV/in	Average value: 4.71 kV/mm Grade Count:7
Arc Resistance	90.0 - 123 sec	90.0 - 123 sec	Average value: 98.3 sec Grade Count:6

Processing Properties	Metric	English	Comments
Cure Time	10.0 - 60.0 min	0.167 - 1.00 hour	Average value: 21.3 min Grade Count:6
	45.0 - 45.0 min @Temperature 100 - 100 °C	0.750 - 0.750 hour @Temperature 212 - 212 °F	Average value: 45.0 min Grade Count:1

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