

Overview of materials for Glass Reinforced, Modified SMA

Category : Polymer , Thermoplastic , SMA Polymer , Glass Reinforced, Modified SMA

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Glass Reinforced, Modified SMA". 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-Glass-Reinforced-Modified-SMA.php

Physical Properties	Metric	English	Comments
Density	1.15 - 1.35 g/cc	0.0415 - 0.0488 lb/in ³	Average value: 1.21 g/cc Grade Count:8
Filler Content	12.0 - 30.0 %	12.0 - 30.0 %	Average value: 17.4 % Grade Count:5
Linear Mold Shrinkage	0.00100 - 0.00500 cm/cm	0.00100 - 0.00500 in/in	Average value: 0.00269 cm/cm Grade Count:8
Melt Flow	0.200 - 1.10 g/10 min	0.200 - 1.10 g/10 min	Average value: 0.660 g/10 min Grade Count:5

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	106 - 114	106 - 114	Average value: 111 Grade Count:3
Tensile Strength, Ultimate	55.0 - 103 MPa	7980 - 14900 psi	Average value: 71.5 MPa Grade Count:8
Elongation at Break	2.00 - 3.00 %	2.00 - 3.00 %	Average value: 2.67 % Grade Count:3
Elongation at Yield	1.70 - 2.40 %	1.70 - 2.40 %	Average value: 2.14 % Grade Count:5
Modulus of Elasticity	4.20 - 8.20 GPa	609 - 1190 ksi	Average value: 5.46 GPa Grade Count:5
Flexural Yield Strength	83.0 - 166 MPa	12000 - 24100 psi	Average value: 109 MPa Grade Count:8
Flexural Modulus	4.00 - 10.6 GPa	580 - 1540 ksi	Average value: 5.66 GPa Grade Count:8
Izod Impact, Notched	0.750 - 0.960 J/cm	1.41 - 1.80 ft-lb/in	Average value: 0.873 J/cm Grade Count:3
Izod Impact, Unnotched	2.67 - 3.84 J/cm	5.00 - 7.19 ft-lb/in	Average value: 3.10 J/cm Grade Count:3
Izod Impact, Notched (ISO)	7.80 - 11.4 kJ/m ²	3.71 - 5.42 ft-lb/in ²	Average value: 9.50 kJ/m ² Grade Count:5
	4.60 - 9.70 kJ/m ²	2.19 - 4.62 ft-lb/in ²	Average value: 6.98 kJ/m ² Grade

Mechanical Properties	Metric @Temperature -40.0 - - 40.0 °C	English @Temperature -40.0 - - 40.0 °F	Count:5 Comments
Charpy Impact Unnotched	1.84 - 3.36 J/cm ²	8.76 - 16.0 ft-lb/in ²	Average value: 2.64 J/cm ² Grade Count:5
Charpy Impact, Notched	0.770 - 1.38 J/cm ²	3.66 - 6.57 ft-lb/in ²	Average value: 1.05 J/cm ² Grade Count:5

Thermal Properties	Metric	English	Comments
CTE, linear	43.2 - 59.4 μm/m-°C	24.0 - 33.0 μin/in-°F	Average value: 51.8 μm/m-°C Grade Count:5
Deflection Temperature at 0.46 MPa (66 psi)	120 - 132 °C	248 - 270 °F	Average value: 126 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	115 - 124 °C	239 - 255 °F	Average value: 120 °C Grade Count:8

Processing Properties	Metric	English	Comments
Processing Temperature	227 - 288 °C	440 - 550 °F	Average value: 261 °C Grade Count:5
Melt Temperature	232 - 288 °C	450 - 550 °F	Average value: 262 °C Grade Count:8
Mold Temperature	32.2 - 71.1 °C	90.0 - 160 °F	Average value: 53.3 °C Grade Count:5

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