

Overview of materials for Acrylic/Polycarbonate Alloy

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Acrylic/Polycarbonate Alloy , Polycarbonate (PC)

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Acrylic/Polycarbonate Alloy". 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-AcrylicPolycarbonate-Alloy.php

Physical Properties	Metric	English	Comments
Density	1.12 - 1.29 g/cc	0.0405 - 0.0466 lb/in ³	Average value: 1.19 g/cc Grade Count:26
Water Absorption	0.220 - 0.260 %	0.220 - 0.260 %	Average value: 0.251 % Grade Count:12
Linear Mold Shrinkage	0.00300 - 0.00900 cm/cm	0.00300 - 0.00900 in/in	Average value: 0.00639 cm/cm Grade Count:25
Melt Flow	1.90 - 7.90 g/10 min	1.90 - 7.90 g/10 min	Average value: 3.85 g/10 min Grade Count:6

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	44.0 - 55.0	44.0 - 55.0	Average value: 48.5 Grade Count:6
Hardness, Rockwell R	46.0	46.0	Average value: 46.0 Grade Count:3
Tensile Strength, Ultimate	41.4 - 61.0 MPa	6000 - 8850 psi	Average value: 49.7 MPa Grade Count:22
Tensile Strength, Yield	48.3 - 62.7 MPa	7010 - 9090 psi	Average value: 55.7 MPa Grade Count:4
Elongation at Break	10.0 - 88.0 %	10.0 - 88.0 %	Average value: 26.7 % Grade Count:25
Elongation at Yield	3.70 - 4.70 %	3.70 - 4.70 %	Average value: 4.23 % Grade Count:6
Modulus of Elasticity	1.72 - 2.60 GPa	250 - 377 ksi	Average value: 2.18 GPa Grade Count:25
Flexural Yield Strength	62.1 - 91.7 MPa	9000 - 13300 psi	Average value: 78.0 MPa Grade Count:26
Flexural Modulus	1.93 - 2.41 GPa	280 - 350 ksi	Average value: 2.18 GPa Grade Count:25
Izod Impact, Notched	2.24 - 16.0 J/cm	4.20 - 30.0 ft-lb/in	Average value: 9.69 J/cm Grade Count:26
	2.1356 - 9.12969 J/cm	4.0009 - 17.1037 ft-lb/in	

Mechanical Properties	Metric	English	Comments
	@ Temperature 0.000 - 0.000 °C	@ Temperature 32.0 - 32.0 °F	Average value: 5.63 J/cm Grade Count:2
	2.1356 - 9.12969 J/cm @Diameter 6.35 - 6.35 mm	4.0009 - 17.1037 ft-lb/in @Diameter 0.250 - 0.250 in	Average value: 5.63 J/cm Grade Count:2
Izod Impact, Unnotched	20.3 - 5340 J/cm	38.0 - 10000 ft-lb/in	Average value: 21.0 J/cm Grade Count:16

Thermal Properties	Metric	English	Comments
CTE, linear	93.6 µm/m-°C	52.0 µin/in-°F	Average value: 93.6 µm/m-°C Grade Count:6
	93.6 - 93.6 µm/m-°C @Temperature 0.000 - 100 °C	52.0 - 52.0 µin/in-°F @Temperature 32.0 - 212 °F	Average value: 93.6 µm/m-°C Grade Count:3
Deflection Temperature at 0.46 MPa (66 psi)	102 - 123 °C	215 - 253 °F	Average value: 114 °C Grade Count:10
Deflection Temperature at 1.8 MPa (264 psi)	82.2 - 123 °C	180 - 253 °F	Average value: 99.7 °C Grade Count:19
Vicat Softening Point	119 - 152 °C	246 - 306 °F	Average value: 136 °C Grade Count:6
Flammability, UL94	HB - 5VA	HB - 5VA	Grade Count:20

Optical Properties	Metric	English	Comments
Transmission, Visible	0.000 %	0.000 %	Average value: 0.000 % Grade Count:3

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+8 - 9.90e+10 ohm-cm	1.00e+8 - 9.90e+10 ohm-cm	Average value: 2.02e+10 ohm-cm Grade Count:6
Surface Resistance	1.00e+9 - 9.90e+11 ohm	1.00e+9 - 9.90e+11 ohm	Average value: 1.64e+11 ohm Grade Count:6
Static Decay	2.00 sec	2.00 sec	Average value: 2.00 sec Grade Count:6
Dielectric Constant	2.72	2.72	Average value: 2.72 Grade Count:3
Dissipation Factor	0.00900	0.00900	Average value: 0.00900 Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	193 - 249 °C	380 - 480 °F	Average value: 222 °C Grade Count:9

Melt Temperature Processing Properties	199 - 266 °C Metric	390 - 510 °F English	Average value: 244 °C Grade Count:14 Comments
Mold Temperature	32.2 - 98.9 °C	90.0 - 210 °F	Average value: 55.4 °C Grade Count:23
Drying Temperature	82.2 °C	180 °F	Average value: 82.2 °C Grade Count:13
Moisture Content	0.0200 %	0.0200 %	Average value: 0.0200 % Grade Count:10
Dew Point	-17.8 °C	0.000 °F	Average value: -17.8 °C Grade Count:10
Injection Pressure	33.1 - 103 MPa	4800 - 15000 psi	Average value: 71.2 MPa Grade Count:20

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