

Overview of materials for PVC/Acrylic Alloy

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Vinyl (PVC) , PVC/Acrylic Alloy

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.25 - 1.49 g/cc	0.0452 - 0.0538 lb/in ³	Average value: 1.36 g/cc Grade Count:34
Water Absorption	0.0600 - 0.0700 %	0.0600 - 0.0700 %	Average value: 0.0633 % Grade Count:3
Linear Mold Shrinkage	0.00100 - 0.00600 cm/cm	0.00100 - 0.00600 in/in	Average value: 0.00468 cm/cm Grade Count:11

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	82.0 - 110	82.0 - 110	Average value: 97.8 Grade Count:27
Tensile Strength, Ultimate	33.0 - 53.0 MPa	4790 - 7690 psi	Average value: 43.6 MPa Grade Count:28
Tensile Strength, Yield	39.3 - 40.7 MPa	5700 - 5900 psi	Average value: 40.1 MPa Grade Count:7
Elongation at Break	55.0 - 195 %	55.0 - 195 %	Average value: 128 % Grade Count:19
Modulus of Elasticity	1.87 - 2.90 GPa	271 - 420 ksi	Average value: 2.36 GPa Grade Count:21
Flexural Yield Strength	44.0 - 76.0 MPa	6380 - 11000 psi	Average value: 66.1 MPa Grade Count:34
Flexural Modulus	2.21 - 3.10 GPa	320 - 449 ksi	Average value: 2.47 GPa Grade Count:15
Izod Impact, Notched	0.320 - 9.60 J/cm	0.599 - 18.0 ft-lb/in	Average value: 5.49 J/cm Grade Count:33
	0.500 - 1.0678 J/cm @Temperature -29.0 - 0.000 °C	0.937 - 2.0004 ft-lb/in @Temperature -20.2 - 32.0 °F	Average value: 0.784 J/cm Grade Count:2
Taber Abrasion, mg/1000 Cycles	0.0380	0.0380	Average value: 0.0380 Grade Count:3

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
	101 $\mu\text{m}/\text{m}-^{\circ}\text{C}$	188 $\mu\text{in}/\text{in}-^{\circ}\text{F}$	Average value: 79.9 $\mu\text{m}/\text{m}-^{\circ}\text{C}$ Grade Count:3
	75.6 - 75.6 $\mu\text{m}/\text{m}-^{\circ}\text{C}$	42.0 - 42.0 $\mu\text{in}/\text{in}-^{\circ}\text{F}$	Average value: 75.6 $\mu\text{m}/\text{m}-^{\circ}\text{C}$ Grade Count:1
	@Temperature 16.0 - 16.0 $^{\circ}\text{C}$	@Temperature 60.8 - 60.8 $^{\circ}\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	65.6 - 82.0 $^{\circ}\text{C}$	150 - 180 $^{\circ}\text{F}$	Average value: 74.8 $^{\circ}\text{C}$ Grade Count:34
UL RTI, Electrical	50.0 $^{\circ}\text{C}$	122 $^{\circ}\text{F}$	Average value: 50.0 $^{\circ}\text{C}$ Grade Count:4
UL RTI, Mechanical with Impact	50.0 $^{\circ}\text{C}$	122 $^{\circ}\text{F}$	Average value: 50.0 $^{\circ}\text{C}$ Grade Count:4
UL RTI, Mechanical without Impact	50.0 $^{\circ}\text{C}$	122 $^{\circ}\text{F}$	Average value: 50.0 $^{\circ}\text{C}$ Grade Count:4
Flammability, UL94	V-0 - 5VA	V-0 - 5VA	Grade Count:20

Processing Properties	Metric	English	Comments
Processing Temperature	160 - 200 $^{\circ}\text{C}$	320 - 392 $^{\circ}\text{F}$	Average value: 179 $^{\circ}\text{C}$ Grade Count:19
Adapter Temperature	171 - 177 $^{\circ}\text{C}$	340 - 350 $^{\circ}\text{F}$	Average value: 174 $^{\circ}\text{C}$ Grade Count:4
Die Temperature	171 - 177 $^{\circ}\text{C}$	340 - 350 $^{\circ}\text{F}$	Average value: 174 $^{\circ}\text{C}$ Grade Count:4
Melt Temperature	157 - 207 $^{\circ}\text{C}$	315 - 405 $^{\circ}\text{F}$	Average value: 182 $^{\circ}\text{C}$ Grade Count:6

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