

Overview of materials for Acrylonitrile Butadiene Styrene (ABS), Glass Fiber Filled, Flame Retardant

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Glass Fiber Filled, Flame Retardant

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Acrylonitrile Butadiene Styrene (ABS), Glass Fiber Filled, Flame Retardant". 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-Acrylonitrile-Butadiene-Styrene-ABS-Glass-Fiber-Filled-Flame-Retardant.php

Physical Properties	Metric	English	Comments
Density	1.13 - 1.45 g/cc	0.0408 - 0.0524 lb/in ³	Average value: 1.34 g/cc Grade Count:15
Filler Content	10.0 - 30.0 %	10.0 - 30.0 %	Average value: 17.0 % Grade Count:5
Water Absorption	0.0700 - 0.300 %	0.0700 - 0.300 %	Average value: 0.243 % Grade Count:13
Linear Mold Shrinkage	0.00100 - 0.00600 cm/cm	0.00100 - 0.00600 in/in	Average value: 0.00277 cm/cm Grade Count:14

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	103 - 116	103 - 116	Average value: 111 Grade Count:5
Tensile Strength, Ultimate	41.4 - 79.3 MPa	6000 - 11500 psi	Average value: 64.1 MPa Grade Count:5
Tensile Strength, Yield	37.2 - 97.9 MPa	5400 - 14200 psi	Average value: 71.3 MPa Grade Count:10
Elongation at Break	1.50 - 5.00 %	1.50 - 5.00 %	Average value: 2.70 % Grade Count:5
Modulus of Elasticity	3.10 - 9.65 GPa	450 - 1400 ksi	Average value: 6.00 GPa Grade Count:5
Flexural Yield Strength	61.4 - 137 MPa	8900 - 19900 psi	Average value: 102 MPa Grade Count:14
Flexural Modulus	2.21 - 7.86 GPa	320 - 1140 ksi	Average value: 5.37 GPa Grade Count:15
Izod Impact, Notched	0.427 - 2.24 J/cm	0.800 - 4.20 ft-lb/in	Average value: 0.742 J/cm Grade Count:15
Izod Impact, Unnotched	2.40 - 2.67 J/cm	4.50 - 5.00 ft-lb/in	Average value: 2.56 J/cm Grade Count:5

Thermal Properties	Metric	English	Comments
CTE, linear	19.8 - 54.0 $\mu\text{m/m-}^{\circ}\text{C}$	11.0 - 30.0 $\mu\text{in/in-}^{\circ}\text{F}$	Average value: 32.9 $\mu\text{m/m-}^{\circ}\text{C}$ Grade Count:7
Deflection Temperature at 0.46 MPa (66 psi)	104 - 116 $^{\circ}\text{C}$	220 - 240 $^{\circ}\text{F}$	Average value: 109 $^{\circ}\text{C}$ Grade Count:4
Deflection Temperature at 1.8 MPa (264 psi)	81.1 - 121 $^{\circ}\text{C}$	178 - 250 $^{\circ}\text{F}$	Average value: 103 $^{\circ}\text{C}$ Grade Count:14
Vicat Softening Point	100 - 103 $^{\circ}\text{C}$	212 - 217 $^{\circ}\text{F}$	Average value: 102 $^{\circ}\text{C}$ Grade Count:4
Flammability, UL94	V-0	V-0	Grade Count:14

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+9 - 1.00e+16 ohm-cm	1.00e+9 - 1.00e+16 ohm-cm	Average value: 2.60e+15 ohm-cm Grade Count:5
Dielectric Constant	3.30 - 3.70	3.30 - 3.70	Average value: 3.47 Grade Count:4
Dielectric Strength	15.7 kV/mm	400 kV/in	Average value: 15.7 kV/mm Grade Count:4
Dissipation Factor	0.0100	0.0100	Average value: 0.0100 Grade Count:4

Processing Properties	Metric	English	Comments
Melt Temperature	199 - 240 $^{\circ}\text{C}$	390 - 464 $^{\circ}\text{F}$	Average value: 221 $^{\circ}\text{C}$ Grade Count:5
Mold Temperature	48.9 - 93.3 $^{\circ}\text{C}$	120 - 200 $^{\circ}\text{F}$	Average value: 71.1 $^{\circ}\text{C}$ Grade Count:6
Drying Temperature	80.0 - 82.2 $^{\circ}\text{C}$	176 - 180 $^{\circ}\text{F}$	Average value: 81.8 $^{\circ}\text{C}$ Grade Count:5
Moisture Content	0.100 %	0.100 %	Average value: 0.100 % Grade Count:4
Dew Point	-17.8 $^{\circ}\text{C}$	0.000 $^{\circ}\text{F}$	Average value: -17.8 $^{\circ}\text{C}$ Grade Count:4
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:5

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