

Overview of materials for Acrylonitrile Butadiene Styrene (ABS), 30% Glass Fiber Filled

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), 30% Glass Fiber Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Acrylonitrile Butadiene Styrene (ABS), 30% Glass Fiber Filled". Specific grades with glass content between 25% and 34% are included. 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-30-Glass-Fiber-Filled.php

Physical Properties	Metric	English	Comments
Density	1.17 - 1.50 g/cc	0.0423 - 0.0542 lb/in ³	Average value: 1.28 g/cc Grade Count:46
Filler Content	25.0 - 33.0 %	25.0 - 33.0 %	Average value: 29.3 % Grade Count:10
Water Absorption	0.120 - 0.300 %	0.120 - 0.300 %	Average value: 0.142 % Grade Count:12
Maximum Moisture Content	0.0200 - 0.150	0.0200 - 0.150	Average value: 0.0633 Grade Count:3
Linear Mold Shrinkage	0.00100 - 0.00900 cm/cm	0.00100 - 0.00900 in/in	Average value: 0.00177 cm/cm Grade Count:44
Melt Flow	0.100 - 10.0 g/10 min	0.100 - 10.0 g/10 min	Average value: 3.44 g/10 min Grade Count:20
Ash	25.0 - 31.0 %	25.0 - 31.0 %	Average value: 29.3 % Grade Count:6

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	88.0 - 115	88.0 - 115	Average value: 108 Grade Count:21
Tensile Strength, Ultimate	53.8 - 103 MPa	7800 - 15000 psi	Average value: 83.6 MPa Grade Count:25
Tensile Strength, Yield	51.7 - 117 MPa	7500 - 17000 psi	Average value: 85.9 MPa Grade Count:32
Elongation at Break	1.00 - 6.00 %	1.00 - 6.00 %	Average value: 2.61 % Grade Count:34
Elongation at Yield	1.00 - 6.00 %	1.00 - 6.00 %	Average value: 2.88 % Grade Count:10
Modulus of Elasticity	4.30 - 10.0 GPa	624 - 1450 ksi	Average value: 6.97 GPa Grade Count:18
Flexural Yield Strength	12.8 - 162 MPa	1850 - 23500 psi	Average value: 119 MPa Grade Count:40

Flexural Modulus Mechanical Properties	4.14 - 10.0 GPa Metric	600 - 1450 ksi English	Average value: 7.29 GPa Grade Count:41
Izod Impact, Notched	0.402 - 1.23 J/cm	0.753 - 2.30 ft-lb/in	Average value: 0.681 J/cm Grade Count:45
	0.600 - 0.600 J/cm @Temperature 0.000 - 0.000 °C	1.12 - 1.12 ft-lb/in @Temperature 32.0 - 32.0 °F	Average value: 0.600 J/cm Grade Count:1
Izod Impact, Unnotched	2.14 - 4.81 J/cm	4.00 - 9.00 ft-lb/in	Average value: 3.28 J/cm Grade Count:18
Izod Impact, Notched (ISO)	4.60 - 6.00 kJ/m ²	2.19 - 2.86 ft-lb/in ²	Average value: 5.53 kJ/m ² Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	17.0 - 30.6 µm/m-°C	9.44 - 17.0 µin/in-°F	Average value: 27.9 µm/m-°C Grade Count:11
Deflection Temperature at 0.46 MPa (66 psi)	98.9 - 200 °C	210 - 392 °F	Average value: 112 °C Grade Count:27
Deflection Temperature at 1.8 MPa (264 psi)	91.1 - 180 °C	196 - 356 °F	Average value: 104 °C Grade Count:39
Vicat Softening Point	103 - 115 °C	217 - 239 °F	Average value: 109 °C Grade Count:8
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:20

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: 6.46e+15 ohm-cm Grade Count:13
Dielectric Strength	15.7 - 26.0 kV/mm	400 - 660 kV/in	Average value: 18.5 kV/mm Grade Count:10
Arc Resistance	60.0 - 120 sec	60.0 - 120 sec	Average value: 81.7 sec Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	193 - 232 °C	380 - 450 °F	Average value: 215 °C Grade Count:4
Nozzle Temperature	200 - 274 °C	392 - 525 °F	Average value: 230 °C Grade Count:7
Melt Temperature	160 - 288 °C	320 - 550 °F	Average value: 221 °C Grade Count:15
Mold Temperature	40.0 - 93.3 °C	104 - 200 °F	Average value: 67.8 °C Grade Count:18
Drying Temperature	79.4 - 100 °C	175 - 212 °F	Average value: 84.9 °C Grade Count:11
Moisture Content	0.0100 - 0.100 %	0.0100 - 0.100 %	Average value: 0.0850 % Grade Count:6

Processing Properties	Metric	English	Comments
Dew Point	-17.8 °C	5.00 °F	Average value: -17.8 °C Grade Count:3
Injection Pressure	4.83 - 103 MPa	700 - 15000 psi	Average value: 53.6 MPa Grade Count:11

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