

Overview of materials for Acrylonitrile Butadiene Styrene (ABS), 20% Glass Fiber Filled

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), 20% 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), 20% Glass Fiber Filled". Specific grades with glass content between 15% and 24% 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-20-Glass-Fiber-Filled.php

Physical Properties	Metric	English	Comments
Density	1.10 - 1.44 g/cc	0.0397 - 0.0520 lb/in ³	Average value: 1.21 g/cc Grade Count:81
Filler Content	15.0 - 20.0 %	15.0 - 20.0 %	Average value: 18.4 % Grade Count:21
Water Absorption	0.130 - 1.00 %	0.130 - 1.00 %	Average value: 0.252 % Grade Count:29
Moisture Absorption at Equilibrium	0.200 %	0.200 %	Average value: 0.200 % Grade Count:4
Water Absorption at Saturation	0.300 - 1.00 %	0.300 - 1.00 %	Average value: 0.775 % Grade Count:4
Maximum Moisture Content	0.0200 - 0.150	0.0200 - 0.150	Average value: 0.0417 Grade Count:6
Linear Mold Shrinkage	0.00100 - 0.00900 cm/cm	0.00100 - 0.00900 in/in	Average value: 0.00256 cm/cm Grade Count:72
Linear Mold Shrinkage, Transverse	0.00200 - 0.00700 cm/cm	0.00200 - 0.00700 in/in	Average value: 0.00429 cm/cm Grade Count:7
Melt Flow	0.100 - 17.0 g/10 min	0.100 - 17.0 g/10 min	Average value: 6.10 g/10 min Grade Count:34
Ash	15.0 - 20.0 %	15.0 - 20.0 %	Average value: 19.0 % Grade Count:5

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	44.0 - 103	44.0 - 103	Average value: 78.7 Grade Count:6
Hardness, Rockwell R	87.0 - 124	87.0 - 124	Average value: 110 Grade Count:29
Tensile Strength, Ultimate	35.0 - 93.2 MPa	5080 - 13500 psi	Average value: 67.7 MPa Grade Count:49
	8.00 - 60.0 MPa @Temperature 60.0 - 90.0 °C	1160 - 8700 psi @Temperature 140 - 194 °F	Average value: 29.6 MPa Grade Count:3

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	45.5 - 108 MPa	6600 - 15600 psi	Average value: 74.5 MPa Grade Count:40
Elongation at Break	1.00 - 11.0 %	1.00 - 11.0 %	Average value: 3.08 % Grade Count:67
	1.50 - 15.0 %	1.50 - 15.0 %	Average value: 6.32 % Grade Count:2
	@Temperature 60.0 - 90.0 °C	@Temperature 140 - 194 °F	
Elongation at Yield	1.50 - 5.00 %	1.50 - 5.00 %	Average value: 3.00 % Grade Count:8
	1.00 - 1.00 %	1.00 - 1.00 %	Average value: 1.00 % Grade Count:1
	@Temperature 90.0 - 90.0 °C	@Temperature 194 - 194 °F	
Modulus of Elasticity	3.50 - 12.2 GPa	508 - 1770 ksi	Average value: 5.54 GPa Grade Count:33
	2.90 - 5.30 GPa	421 - 769 ksi	Average value: 4.05 GPa Grade Count:2
	@Temperature 60.0 - 90.0 °C	@Temperature 140 - 194 °F	
Flexural Yield Strength	65.5 - 142 MPa	9500 - 20600 psi	Average value: 104 MPa Grade Count:65
Flexural Modulus	2.50 - 6.86 GPa	363 - 996 ksi	Average value: 5.24 GPa Grade Count:71
	2.10 - 2.10 GPa	305 - 305 ksi	Average value: 2.10 GPa Grade Count:1
	@Temperature 60.0 - 60.0 °C	@Temperature 140 - 140 °F	
Izod Impact, Notched	0.392 - 1.35 J/cm	0.735 - 2.54 ft-lb/in	Average value: 0.713 J/cm Grade Count:66
	0.400 - 0.600 J/cm	0.749 - 1.12 ft-lb/in	Average value: 0.475 J/cm Grade Count:3
	@Temperature -40.0 - 0.000 °C	@Temperature -40.0 - 32.0 °F	
	0.400 - 0.500 J/cm	0.749 - 0.937 ft-lb/in	Average value: 0.475 J/cm Grade Count:1
	@Temperature -30.0 - 0.000 °C	@Temperature -22.0 - 32.0 °F	
	0.400 - 0.500 J/cm	0.749 - 0.937 ft-lb/in	Average value: 0.475 J/cm Grade Count:1
	@Thickness 3.20 - 3.20 mm	@Thickness 0.126 - 0.126 in	
Izod Impact, Unnotched	1.60 - 4.00 J/cm	3.00 - 7.50 ft-lb/in	Average value: 2.93 J/cm Grade Count:30
Izod Impact, Notched (ISO)	6.00 - 16.0 kJ/m²	2.86 - 7.61 ft-lb/in²	Average value: 8.14 kJ/m² Grade Count:7
	5.00 - 6.00 kJ/m²	2.38 - 2.86 ft-lb/in²	Average value: 5.67 kJ/m² Grade

Mechanical Properties	Metric @Temperature -30.0 - - 30.0 °C	English @Temperature -22.0 - - 22.0 °F	Count:3 Comments
Izod Impact, Unnotched (ISO)	18.0 - 20.0 kJ/m²	8.57 - 9.52 ft-lb/in²	Average value: 19.3 kJ/m² Grade Count:3
	15.0 - 15.0 kJ/m² @Temperature -30.0 - - 30.0 °C	7.14 - 7.14 ft-lb/in² @Temperature -22.0 - - 22.0 °F	Average value: 15.0 kJ/m² Grade Count:1
Charpy Impact Unnotched	0.800 - 30.0 J/cm²	3.81 - 143 ft-lb/in²	Average value: 6.23 J/cm² Grade Count:6
	0.400 - 5.00 J/cm² @Temperature -40.0 - - 20.0 °C	1.90 - 23.8 ft-lb/in² @Temperature -40.0 - - 4.00 °F	Average value: 2.36 J/cm² Grade Count:4
Charpy Impact, Notched	0.200 - 0.700 J/cm²	0.952 - 3.33 ft-lb/in²	Average value: 0.529 J/cm² Grade Count:12
	0.200 - 0.600 J/cm² @Temperature -30.0 - - 20.0 °C	0.952 - 2.86 ft-lb/in² @Temperature -22.0 - - 4.00 °F	Average value: 0.450 J/cm² Grade Count:6

Thermal Properties	Metric	English	Comments
CTE, linear	21.0 - 54.0 µm/m-°C	11.7 - 30.0 µin/in-°F	Average value: 36.5 µm/m-°C Grade Count:18
Melting Point	165 - 225 °C	329 - 437 °F	Average value: 205 °C Grade Count:3
Maximum Service Temperature, Air	60.0 - 75.0 °C	140 - 167 °F	Average value: 66.3 °C Grade Count:4
Hot Ball Pressure Test	80.0 - 100 °C	176 - 212 °F	Average value: 94.5 °C Grade Count:4
Deflection Temperature at 0.46 MPa (66 psi)	82.0 - 195 °C	180 - 383 °F	Average value: 107 °C Grade Count:46
Deflection Temperature at 1.8 MPa (264 psi)	71.0 - 175 °C	160 - 347 °F	Average value: 100 °C Grade Count:67
Vicat Softening Point	85.0 - 117 °C	185 - 243 °F	Average value: 104 °C Grade Count:25
UL RTI, Electrical	50.0 - 60.0 °C	122 - 140 °F	Average value: 55.7 °C Grade Count:6
UL RTI, Mechanical with Impact	50.0 - 60.0 °C	122 - 140 °F	Average value: 55.7 °C Grade Count:6

Electrical Properties	Metric	English	Comments
Electrical Resistivity	500000 - 1.00e+16 ohm-cm	500000 - 1.00e+16 ohm-cm	Average value: 2.88e+15 ohm-cm Grade Count:33
Surface Resistance	1e+05 - 1.00e+15 ohm	1e+05 - 1.00e+15 ohm	Average value: 1.50e+14 ohm Grade Count:16
Static Decay	2.00 sec	2.00 sec	Average value: 2.00 sec Grade Count:5

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.60 - 3.50	2.60 - 3.50	Average value: 3.03 Grade Count:8
Dielectric Strength	15.7 - 35.0 kV/mm	400 - 889 kV/in	Average value: 21.3 kV/mm Grade Count:25
Dissipation Factor	0.00400 - 0.0200	0.00400 - 0.0200	Average value: 0.00830 Grade Count:7
Arc Resistance	80.0 - 180 sec	80.0 - 180 sec	Average value: 103 sec Grade Count:3
Comparative Tracking Index	250 - 600 V	250 - 600 V	Average value: 502 V Grade Count:11

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China