

Overview of materials for Acrylonitrile Butadiene Styrene (ABS), Carbon Black Filled

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Carbon Black Filled

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.10 - 1.14 g/cc	0.0397 - 0.0412 lb/in ³	Average value: 1.12 g/cc Grade Count:5
Linear Mold Shrinkage	0.00300 - 0.00800 cm/cm	0.00300 - 0.00800 in/in	Average value: 0.00450 cm/cm Grade Count:3

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	27.6 - 119 MPa	4000 - 17300 psi	Average value: 57.1 MPa Grade Count:3
Elongation at Break	2.00 - 11.0 %	2.00 - 11.0 %	Average value: 4.14 % Grade Count:4
Flexural Yield Strength	49.6 - 162 MPa	7200 - 23500 psi	Average value: 89.6 MPa Grade Count:3
Flexural Modulus	1.90 - 4.28 GPa	276 - 621 ksi	Average value: 2.94 GPa Grade Count:4
Izod Impact, Notched	0.340 - 0.534 J/cm	0.637 - 1.00 ft-lb/in	Average value: 0.469 J/cm Grade Count:3
Izod Impact, Unnotched	0.600 - 7.21 J/cm	1.12 - 13.5 ft-lb/in	Average value: 3.41 J/cm Grade Count:4
Izod Impact, Notched (ISO)	8.00 - 8.00 kJ/m ² @Temperature -20.0 - -20.0 °C	3.81 - 3.81 ft-lb/in ² @Temperature -4.00 - -4.00 °F	Average value: 8.00 kJ/m ² Grade Count:1
	8.00 - 8.00 kJ/m ² @Thickness 4.00 - 4.00 mm	3.81 - 3.81 ft-lb/in ² @Thickness 0.157 - 0.157 in	Average value: 8.00 kJ/m ² Grade Count:1
Izod Impact, Unnotched (ISO)	60.0 - 60.0 kJ/m ² @Temperature -20.0 - -20.0 °C	28.6 - 28.6 ft-lb/in ² @Temperature -4.00 - -4.00 °F	Average value: 60.0 kJ/m ² Grade Count:1
	60.0 - 60.0 kJ/m ²	28.6 - 28.6 ft-lb/in ²	

Mechanical Properties	Metric	English	Comments
	@ Thickness 4.00 - 4.00 mm	@ Thickness 0.157 - 0.157 in	Average value: 60.0 kJ/m ² Grade Count:1
Charpy Impact, Notched	1.50 - 1.50 J/cm ² @Temperature -20.0 - - 20.0 °C	7.14 - 7.14 ft-lb/in ² @Temperature -4.00 - - 4.00 °F	Average value: 1.50 J/cm ² Grade Count:1
	1.50 - 1.50 J/cm ² @Thickness 102 - 102 mm	7.14 - 7.14 ft-lb/in ² @Thickness 4.00 - 4.00 in	Average value: 1.50 J/cm ² Grade Count:1

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	88.0 - 100 °C	190 - 212 °F	Average value: 94.8 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	73.0 - 102 °C	163 - 215 °F	Average value: 86.8 °C Grade Count:5

Electrical Properties	Metric	English	Comments
Electrical Resistivity	100 - 1.00e+6 ohm-cm	100 - 1.00e+6 ohm-cm	Average value: 500000 ohm-cm Grade Count:4
Surface Resistance	3.00 - 1.00e+6 ohm	3.00 - 1.00e+6 ohm	Average value: 376000 ohm Grade Count:5

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