

Overview of materials for Polypropylene, Blow Molding Grade

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene, Blow Molding Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polypropylene, Blow Molding Grade". 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-Polypropylene-Blow-Molding-Grade.php

Physical Properties	Metric	English	Comments
Density	0.886 - 1.04 g/cc	0.0320 - 0.0376 lb/in ³	Average value: 0.905 g/cc Grade Count:61
Oxygen Transmission	95.0 cc-mm/m ² -24hr-atm	241 cc-mil/100 in ² -24hr-atm	Average value: 95.0 cc-mm/m ² -24hr-atm Grade Count:10
Linear Mold Shrinkage	0.0100 - 0.0250 cm/cm	0.0100 - 0.0250 in/in	Average value: 0.0173 cm/cm Grade Count:7
Melt Flow	0.500 - 1800 g/10 min	0.500 - 1800 g/10 min	Average value: 81.3 g/10 min Grade Count:69

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	65.0 - 110	65.0 - 110	Average value: 91.7 Grade Count:32
Hardness, Shore D	61.0 - 73.0	61.0 - 73.0	Average value: 68.3 Grade Count:4
Tensile Strength, Ultimate	23.4 - 33.1 MPa	3390 - 4800 psi	Average value: 28.3 MPa Grade Count:13
Tensile Strength, Yield	22.8 - 40.3 MPa	3300 - 5850 psi	Average value: 30.5 MPa Grade Count:51
Elongation at Break	8.00 - 700 %	8.00 - 700 %	Average value: 61.3 % Grade Count:18
Elongation at Yield	4.60 - 20.0 %	4.60 - 20.0 %	Average value: 11.6 % Grade Count:39
Modulus of Elasticity	0.827 - 1.38 GPa	120 - 200 ksi	Average value: 1.08 GPa Grade Count:17
Flexural Modulus	0.689 - 2.45 GPa	99.9 - 355 ksi	Average value: 1.19 GPa Grade Count:65
Izod Impact, Notched	0.200 - 5340 J/cm	0.375 - 10000 ft-lb/in	Average value: 1.44 J/cm Grade Count:54
	0.170 - 3.41696 J/cm @Temperature -20.0 - 4.00 °C	0.318 - 6.40137 ft-lb/in @Temperature -4.00 - 39.2 °F	Average value: 1.07 J/cm Grade Count:8

Mechanical Properties	Metric	English	Comments
Impact, Notched (ISO)	7.50 - 56.0 kJ/m ²	3.57 - 26.6 ft-lb/in ²	Average value: 28.5 kJ/m ² Grade Count:3
	3.60 - 4.20 kJ/m ²	1.71 - 2.00 ft-lb/in ²	Average value: 3.90 kJ/m ² Grade Count:2
	@Temperature -40.0 - 0.000 °C	@Temperature -40.0 - 32.0 °F	
Charpy Impact, Notched	3.00 - 12.0 J/cm ²	14.3 - 57.1 ft-lb/in ²	Average value: 7.67 J/cm ² Grade Count:2
	@Temperature -20.0 - 0.000 °C	@Temperature -4.00 - 32.0 °F	
Gardner Impact	1.00 - 1.00 J	0.738 - 0.738 ft-lb	Average value: 1.00 J Grade Count:1
	@Temperature -30.0 - - 30.0 °C	@Temperature -22.0 - - 22.0 °F	
Tangent Modulus	869 - 1300 MPa	126000 - 189000 psi	Average value: 1020 MPa Grade Count:3

Thermal Properties	Metric	English	Comments
Melting Point	143 - 165 °C	289 - 329 °F	Average value: 148 °C Grade Count:17
Deflection Temperature at 0.46 MPa (66 psi)	72.0 - 133 °C	162 - 271 °F	Average value: 91.9 °C Grade Count:58
Deflection Temperature at 1.8 MPa (264 psi)	45.0 - 60.0 °C	113 - 140 °F	Average value: 54.6 °C Grade Count:8
Vicat Softening Point	67.0 - 156 °C	153 - 313 °F	Average value: 137 °C Grade Count:11

Optical Properties	Metric	English	Comments
Haze	8.00 - 71.0 %	8.00 - 71.0 %	Average value: 26.1 % Grade Count:8

Processing Properties	Metric	English	Comments
Melt Temperature	177 - 249 °C	351 - 480 °F	Average value: 213 °C Grade Count:12

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