

Overview of materials for Polypropylene, Impact Modified; Molded/Extruded

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene, Impact Modified; Molded/Extruded

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polypropylene, Impact Modified; Molded/Extruded". 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-Impact-Modified-MoldedExtruded.php

Physical Properties	Metric	English	Comments
Density	0.780 - 2.80 g/cc	0.0282 - 0.101 lb/in ³	Average value: 0.928 g/cc Grade Count:188
Water Absorption	0.0100 - 0.0500 %	0.0100 - 0.0500 %	Average value: 0.0131 % Grade Count:13
Thickness	50.0 - 840 microns	1.97 - 33.1 mil	Average value: 230 microns Grade Count:8
Linear Mold Shrinkage	0.00400 - 0.0252 cm/cm	0.00400 - 0.0252 in/in	Average value: 0.0158 cm/cm Grade Count:51
Linear Mold Shrinkage, Transverse	0.00110 - 0.0263 cm/cm	0.00110 - 0.0263 in/in	Average value: 0.0164 cm/cm Grade Count:15
Melt Flow	0.300 - 100 g/10 min	0.300 - 100 g/10 min	Average value: 18.2 g/10 min Grade Count:222

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	49.0 - 111	49.0 - 111	Average value: 86.3 Grade Count:103
Hardness, Shore D	52.0 - 70.0	52.0 - 70.0	Average value: 62.2 Grade Count:21
Tensile Strength, Ultimate	5.00 - 34.5 MPa	725 - 5000 psi	Average value: 20.3 MPa Grade Count:29
Tensile Strength, Yield	8.96 - 35.2 MPa	1300 - 5110 psi	Average value: 25.1 MPa Grade Count:200
Film Elongation at Break, MD	600 - 700 %	600 - 700 %	Average value: 652 % Grade Count:5
Film Elongation at Break, TD	570 - 900 %	570 - 900 %	Average value: 804 % Grade Count:5
Elongation at Break	1.80 - 500 %	1.80 - 500 %	Average value: 189 % Grade Count:87
	>= 100 %	>= 100 %	Average value: 100 % Grade Count:1
	@Temperature 60.0 - 90.0 °C	@Temperature 140 - 194 °F	

Elongation at Yield Mechanical Properties	0.900 - 350 % Metric	0.900 - 350 % English	Average value: 12.0 % Grade Count:119
	8.50 - 9.00 % @Temperature 60.0 - 90.0 °C	8.50 - 9.00 % @Temperature 140 - 194 °F	Average value: 8.75 % Grade Count:1
Modulus of Elasticity	0.750 - 3.50 GPa	109 - 508 ksi	Average value: 1.35 GPa Grade Count:43
	0.650 - 1.10 GPa @Temperature 60.0 - 90.0 °C	94.3 - 160 ksi @Temperature 140 - 194 °F	Average value: 0.875 GPa Grade Count:1
Flexural Yield Strength	17.0 - 51.7 MPa	2470 - 7500 psi	Average value: 29.7 MPa Grade Count:27
Flexural Modulus	0.134 - 2.89 GPa	19.4 - 419 ksi	Average value: 1.20 GPa Grade Count:215
Secant Modulus, MD	0.150 - 0.896 GPa	21.8 - 130 ksi	Average value: 0.425 GPa Grade Count:5
Secant Modulus, TD	0.250 - 0.772 GPa	36.3 - 112 ksi	Average value: 0.447 GPa Grade Count:5
Izod Impact, Notched	0.267 J/cm - NB	0.500 ft-lb/in - NB	Average value: 2.14 J/cm Grade Count:169
	0.176 - 7.26104 J/cm @Temperature -30.0 - 4.00 °C	0.330 - 13.6029 ft-lb/in @Temperature -22.0 - 39.2 °F	Average value: 0.794 J/cm Grade Count:56
	0.850 - 0.850 J/cm @Temperature -10.0 - 0.000 °C	1.59 - 1.59 ft-lb/in @Temperature 14.0 - 32.0 °F	Average value: 0.794 J/cm Grade Count:2
	0.850 - 0.850 J/cm @Thickness 3.17 - 6.40 mm	1.59 - 1.59 ft-lb/in @Thickness 0.125 - 0.252 in	Average value: 0.794 J/cm Grade Count:2
	0.250 - 1.35 J/cm @Diameter 0.125 - 3.17 mm	0.468 - 2.53 ft-lb/in @Diameter 0.00492 - 0.125 in	Average value: 0.794 J/cm Grade Count:11
	0.250 - 1.35 J/cm @Temperature -20.0 - - 20.0 °C	0.468 - 2.53 ft-lb/in @Temperature -4.00 - - 4.00 °F	Average value: 0.794 J/cm Grade Count:11
Izod Impact, Unnotched	0.539 J/cm - NB	1.01 ft-lb/in - NB	Average value: 3.18 J/cm Grade Count:37
	0.294199 - 0.686465 J/cm @Temperature -10.0 - - 10.0 °C	0.551156 - 1.28603 ft- lb/in @Temperature 14.0 - 14.0 °F	Average value: 0.498 J/cm Grade Count:22

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched (ISO)	4.00 - 60.9 kJ/m ²	1.40 - 29.0 ft-lb/in ²	Average value: 22.4 kJ/m ² Grade Count:24
	2.94 - 13.0 kJ/m ² @Temperature -40.0 - -10.0 °C	1.40 - 6.19 ft-lb/in ² @Temperature -40.0 - 14.0 °F	Average value: 5.20 kJ/m ² Grade Count:10
Izod Impact, Unnotched (ISO)	14.0 kJ/m ² - NB	6.66 ft-lb/in ² - NB	Average value: 19.0 kJ/m ² Grade Count:4
Charpy Impact Unnotched	0.600 - 1000 J/cm ²	2.86 - 4760 ft-lb/in ²	Average value: 3.37 J/cm ² Grade Count:13
	1.50 - 999.9 J/cm ² @Temperature -20.0 - -20.0 °C	7.14 - 4759 ft-lb/in ² @Temperature -4.00 - -4.00 °F	Average value: 5.63 J/cm ² Grade Count:9
Charpy Impact, Notched	0.130 - 1000 J/cm ²	0.619 - 4760 ft-lb/in ²	Average value: 4.67 J/cm ² Grade Count:31
	0.100 - 12.0 J/cm ² @Temperature -30.0 - 0.000 °C	0.476 - 57.1 ft-lb/in ² @Temperature -22.0 - 32.0 °F	Average value: 1.91 J/cm ² Grade Count:27
Gardner Impact	16.3 - 40.7 J	12.0 - 30.0 ft-lb	Average value: 32.4 J Grade Count:8
	2.26422 - 40.6746 J @Temperature -30.0 - -20.0 °C	1.67000 - 30.0000 ft-lb @Temperature -22.0 - -4.00 °F	Average value: 23.4 J Grade Count:21
	16.6088 - 31.8618 J @Temperature -30.0 - -28.9 °C	12.2500 - 23.5000 ft-lb @Temperature -22.0 - -20.0 °F	Average value: 23.4 J Grade Count:12
	16.6088 - 31.8618 J @Thickness 3.17 - 3.17 mm	12.2500 - 23.5000 ft-lb @Thickness 0.125 - 0.125 in	Average value: 23.4 J Grade Count:12
Falling Dart Impact	5.09788 - 5.09788 J @Temperature -30.0 - -30.0 °C	3.76000 - 3.76000 ft-lb @Temperature -22.0 - -22.0 °F	Average value: 5.10 J Grade Count:1
	5.09788 - 5.09788 J @Thickness 1.78 - 1.78 mm	3.76000 - 3.76000 ft-lb @Thickness 0.0701 - 0.0701 in	Average value: 5.10 J Grade Count:1
Dart Drop Test	23.2 - 120 g	0.0512 - 0.265 lb	Average value: 56.8 g Grade Count:3
Film Tensile Strength at Break, MD	30.0 - 65.0 MPa	4350 - 9430 psi	Average value: 44.4 MPa Grade Count:5
Film Tensile Strength at Break, TD	25.0 - 60.0 MPa	3630 - 8700 psi	Average value: 36.8 MPa Grade Count:5

Tangent Modulus Mechanical Properties	740 - 1590 MPa Metric	107000 - 230000 psi English	Average value: 1250 MPa Grade Count:10 Comments
--	--------------------------	--------------------------------	---

Thermal Properties	Metric	English	Comments
Melting Point	120 - 327 °C	248 - 621 °F	Average value: 190 °C Grade Count:40

Electrical Properties	Metric	English	Comments
Electrical Resistivity	100 - 1.00e+16 ohm- cm	100 - 1.00e+16 ohm- cm	Average value: 5.17e+15 ohm-cm Grade Count:6
Surface Resistance	10000 - 1.00e+15 ohm	10000 - 1.00e+15 ohm	Average value: 1.67e+14 ohm Grade Count:6
Static Decay	1.00 sec	1.00 sec	Average value: 1.00 sec Grade Count:3

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