

Overview of materials for Polypropylene Copolymer

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene Copolymer

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	0.780 - 2.77 g/cc	0.0282 - 0.100 lb/in ³	Average value: 0.952 g/cc Grade Count:729
Filler Content	0.000 - 75.0 %	0.000 - 75.0 %	Average value: 20.8 % Grade Count:57
Water Absorption	0.0100 - 0.300 %	0.0100 - 0.300 %	Average value: 0.0706 % Grade Count:49
Water Vapor Transmission	18.8 - 18.8 g/m ² /day @Temperature 37.8 - 37.8 °C	1.21 - 1.21 g/100 in ² /day @Temperature 100 - 100 °F	Average value: 18.8 g/m ² /day Grade Count:1
Oxidative Induction Time (OIT)	30.0 - 40.0 min @Temperature 190 - 220 °C	30.0 - 40.0 min @Temperature 374 - 428 °F	Average value: 48.0 min Grade Count:5
Linear Mold Shrinkage	0.000150 - 0.0350 cm/cm	0.000150 - 0.0350 in/in	Average value: 0.0123 cm/cm Grade Count:213
Linear Mold Shrinkage, Transverse	0.00500 - 0.0250 cm/cm	0.00500 - 0.0250 in/in	Average value: 0.0145 cm/cm Grade Count:34
Melt Flow	0.200 - 150 g/10 min	0.200 - 150 g/10 min	Average value: 18.2 g/10 min Grade Count:900
Base Resin Melt Index	1.20 - 45.0 g/10 min @Temperature 230 - 230 °C	1.20 - 45.0 g/10 min @Temperature 446 - 446 °F	Average value: 16.4 g/10 min Grade Count:23
Ash	0.0350 - 40.0 %	0.0350 - 40.0 %	Average value: 12.2 % Grade Count:19
	0.300 - 0.500 % @Temperature 600 - 900 °C	0.300 - 0.500 % @Temperature 1110 - 1650 °F	Average value: 0.433 % Grade Count:3

Mechanical Properties	Metric	English	Comments
-----------------------	--------	---------	----------

Hardness, Rockwell M Mechanical Properties	55.0 Metric	55.0 English	Average value: 55.0 Grade Count:3 Comments
Hardness, Rockwell R	33.0 - 111	33.0 - 111	Average value: 85.6 Grade Count:325
Hardness, Shore D	52.0 - 85.0	52.0 - 85.0	Average value: 66.7 Grade Count:124
Ball Indentation Hardness	35.0 - 82.0 MPa	5080 - 11900 psi	Average value: 62.5 MPa Grade Count:21
Tensile Strength, Ultimate	5.00 - 128 MPa	725 - 18500 psi	Average value: 28.2 MPa Grade Count:238
	9.00 - 15.0 MPa @Temperature 60.0 - 90.0 °C	1310 - 2180 psi @Temperature 140 - 194 °F	Average value: 12.0 MPa Grade Count:1
Tensile Strength, Yield	8.96 - 110 MPa	1300 - 16000 psi	Average value: 26.4 MPa Grade Count:712
Film Elongation at Break, MD	80.0 - 800 %	80.0 - 800 %	Average value: 577 % Grade Count:19
Film Elongation at Break, TD	500 - 800 %	500 - 800 %	Average value: 627 % Grade Count:11
Elongation at Break	1.30 - 1000 %	1.30 - 1000 %	Average value: 190 % Grade Count:234
Elongation at Yield	0.500 - 500 %	0.500 - 500 %	Average value: 17.4 % Grade Count:523
Modulus of Elasticity	0.100 - 13.0 GPa	14.5 - 1890 ksi	Average value: 1.50 GPa Grade Count:209
Flexural Yield Strength	13.4 - 181 MPa	1950 - 26300 psi	Average value: 47.7 MPa Grade Count:128
Flexural Modulus	0.134 - 11.0 GPa	19.4 - 1600 ksi	Average value: 1.39 GPa Grade Count:816
	0.370 - 0.560 GPa @Temperature 60.0 - 90.0 °C	53.7 - 81.2 ksi @Temperature 140 - 194 °F	Average value: 0.465 GPa Grade Count:1
Shear Modulus	0.260 - 0.730 GPa	37.7 - 106 ksi	Average value: 0.541 GPa Grade Count:20
Secant Modulus	0.345 - 1.50 GPa	50.0 - 218 ksi	Average value: 0.982 GPa Grade Count:3
Izod Impact, Notched	0.260 J/cm - NB	0.487 ft-lb/in - NB	Average value: 1.41 J/cm Grade Count:631
	0.160 - 99.99 J/cm @Temperature -40.0 - 4.00 °C	0.300 - 187.3 ft-lb/in @Temperature -40.0 - 39.2 °F	Average value: 0.779 J/cm Grade Count:89
	0.200 J/cm - NB @Temperature -30.0 - 0.000 °C	0.375 ft-lb/in - NB @Temperature -22.0 - 32.0 °F	Average value: 0.779 J/cm Grade Count:26

Mechanical Properties	Metric J/cm^2 - NB	English ft-lb/in^2 - NB	Comments
	@Thickness 3.17 - 3.17 mm	@Thickness 0.125 - 0.125 in	Average value: 0.779 J/cm Grade Count:26
	0.32034 - 1.33475 J/cm @Diameter 0.125 - 3.17 mm	0.60013 - 2.50053 ft-lb/in @Diameter 0.00492 - 0.125 in	Average value: 0.779 J/cm Grade Count:9
	0.32034 - 1.33475 J/cm @Temperature -20.0 - 4.00 °C	0.60013 - 2.50053 ft-lb/in @Temperature -4.00 - 39.2 °F	Average value: 0.779 J/cm Grade Count:9
Izod Impact, Unnotched	0.294 J/cm - NB	0.551 ft-lb/in - NB	Average value: 3.85 J/cm Grade Count:54
	0.343233 - 0.441299 J/cm @Temperature -10.0 - 10.0 °C	0.643016 - 0.826734 ft-lb/in @Temperature 14.0 - 14.0 °F	Average value: 0.392 J/cm Grade Count:3
Izod Impact, Notched (ISO)	4.00 - 21000 kJ/m ²	1.90 - 9990 ft-lb/in ²	Average value: 15.8 kJ/m ² Grade Count:59
	2.00 - 13.0 kJ/m ² @Temperature -40.0 - 0.000 °C	0.952 - 6.19 ft-lb/in ² @Temperature -40.0 - 32.0 °F	Average value: 5.29 kJ/m ² Grade Count:19
Charpy Impact Unnotched	0.800 J/cm ² - NB	3.81 ft-lb/in ² - NB	Average value: 4.14 J/cm ² Grade Count:84
	1.20 J/cm ² - NB @Temperature -40.0 - 0.000 °C	5.71 ft-lb/in ² - NB @Temperature -40.0 - 32.0 °F	Average value: 8.38 J/cm ² Grade Count:41
Charpy Impact, Notched	0.300 - 1000 J/cm ²	1.43 - 4760 ft-lb/in ²	Average value: 1.82 J/cm ² Grade Count:181
	0.100 - 12.0 J/cm ² @Temperature -40.0 - 0.000 °C	0.476 - 57.1 ft-lb/in ² @Temperature -40.0 - 32.0 °F	Average value: 0.597 J/cm ² Grade Count:136
Gardner Impact	1.25 - 136 J	0.920 - 100 ft-lb	Average value: 22.9 J Grade Count:69
	1.00 - 36.0 J @Temperature -30.0 - 20.0 °C	0.738 - 26.6 ft-lb @Temperature -22.0 - 4.00 °F	Average value: 19.8 J Grade Count:41
	4.86 - 23.6 J @Temperature -23.0 - 20.0 °C	3.58 - 17.4 ft-lb @Temperature -9.40 - 4.00 °F	Average value: 19.8 J Grade Count:6
	4.86 - 23.6 J	3.58 - 17.4 ft-lb	

Mechanical Properties	Metric @ Thickness 3.17 - 3.18 mm	English @ Thickness 0.125 - 0.125 in	Comments Average value: 19.8 J Grade Count:6
Dart Drop, Total Energy	5.20 - 50.0 J	3.84 - 36.9 ft-lb	Average value: 23.2 J Grade Count:25
	11.0 - 38.3697 J @Temperature -30.0 - - 29.0 °C	8.11 - 28.3000 ft-lb @Temperature -22.0 - - 20.2 °F	Average value: 25.5 J Grade Count:12
Falling Dart Impact	2.26 - 33.0 J	1.67 - 24.3 ft-lb	Average value: 9.75 J Grade Count:11
	28.2011 - 28.2011 J @Temperature -30.0 - - 30.0 °C	20.8000 - 20.8000 ft-lb @Temperature -22.0 - - 22.0 °F	Average value: 13.1 J Grade Count:1
	3.00 - 27.0 J @Temperature -30.0 - - 30.0 °C	2.21 - 19.9 ft-lb @Temperature -22.0 - - 22.0 °F	Average value: 13.1 J Grade Count:5
	3.00 - 27.0 J @Thickness 3.17 - 3.17 mm	2.21 - 19.9 ft-lb @Thickness 0.125 - 0.125 in	Average value: 13.1 J Grade Count:5
Puncture Energy	10.0 - 48.0 J @Temperature -40.0 - 0.000 °C	7.38 - 35.4 ft-lb @Temperature -40.0 - 32.0 °F	Average value: 23.6 J Grade Count:14

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