

Omnia Plastica PP Polypropylene

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene, Extrusion Grade

Material Notes:

The mechanical features of PP are better than those of PE H.D. It withstands attack by alkali and acids and consequently it is widely used for components in the chemical industry when a moderate stress material is required. Features: Chemical: high chemical resistance. Tensile stress: very high among the polyolefins. Low specific gravity. Easy machinability on mechanical tools. It can be welded. Good stability to temperature. Colour: grey RAL 7032 and natural Weak Point: Compared to the engineering plastics it has low thermal and mechanical properties: tensile stress, flexural and compressive strength, etc. Compared to PE it is more rigid but less shock resistant. Application: Chemical: the widest application field for PP is the chemical industry. Thanks to its high resistance to acids and alkali and its higher temperature resistance than PVC, it is used for components in the chemical, galvanic and petrochemical industries to produce valves, flanges, gears, etc. Food contact: it is physiologically inert, so in natural form, it is approved for use in contact with food. Electrical: good dielectric properties. Weather stability is its best feature for this application. Mechanical: it is also used for mechanical components in corrosive environments. It has a higher tensile stress than H.M.W. PE. Information provided by Omnia Plastica s.p.a. for semifinished products such as sheet, rod, and tube.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Omnia-Plastica-PP-Polypropylene.php

Physical Properties	Metric	English	Comments
Density	0.930 g/cc	0.0336 lb/in ³	ISO.1183 DIN.53479
Moisture Absorption at Equilibrium	0.00 %	0.00 %	50% relative humidity
Water Absorption at Saturation	0.00 %	0.00 %	23°C

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	64	64	dry sample; ISO2039.2
Ball Indentation Hardness	75.0 MPa	10900 psi	ISO2039.1 DIN.53456
Tensile Strength at Break	35.0 MPa	5080 psi	ISO.527 DIN.53455
Elongation at Break	600 %	600 %	ISO.527 DIN.53455
Tensile Modulus	1.10 GPa	160 ksi	ISO.527 DIN.53455
Compressive Strength	4.00 MPa	580 psi	1% strain over 1000 hours; ISO.899 DIN.53444
Charpy Impact Unnotched	NB	NB	7.5 J; ISO.R179 DIN.53453
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	ISO179/3C DIN.53453
Coefficient of Friction, Dynamic	0.35	0.35	on dry ground steel; load =0.05MPa; speed =0.6 m/s

Thermal Properties	Metric	English	Comments
CTE, linear	150 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	83.3 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature 23.0 - 60.0 $^{\circ}\text{C}$	@Temperature 73.4 - 140 $^{\circ}\text{F}$	
Thermal Conductivity	0.400 W/m-K	2.78 BTU-in/hr-ft ² - $^{\circ}\text{F}$	DIN.52612
Melting Point	160 $^{\circ}\text{C}$	320 $^{\circ}\text{F}$	
Maximum Service Temperature, Air	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	Maximum operating temperature continuously for 5000 hours based on a tensile stress of 50% at 23 $^{\circ}\text{C}$.
	110 $^{\circ}\text{C}$	230 $^{\circ}\text{F}$	short period, no load
Deflection Temperature at 1.8 MPa (264 psi)	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	ISO.75 DIN.53461
Minimum Service Temperature, Air	-10.0 $^{\circ}\text{C}$	14.0 $^{\circ}\text{F}$	impact conditions and heavy loads not considered
Flammability, UL94	HB	HB	
Oxygen Index	18 %	18 %	ISO.4589

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ISO.93 DIN.53482
Dielectric Constant	2.2	2.2	ISO.250 DIN.53483
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	100 kV/mm	2540 kV/in	ISO.243 DIN.53481
Dissipation Factor	0.0040	0.0040	ISO.250 DIN.53483
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

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