



Homopolymer Polypropylene

TYPICAL PROPERTIES of POLYPROPYLENE

ASTM or UL test	Property	Homopolymer	Co-Polymer	Flame Retardant
PHYSICAL				
D792	Density (lb/in ³) (g/cm ³)	0.033 0.905	0.033 0.897	0.035 0.988
D570	Water Absorption, 24 hrs (%)	<0.01	0.01	0.02
MECHANICAL				
D638	Tensile Strength (psi)	4,800	4,800	4,300
D638	Tensile Modulus (psi)	195,000	-	-
D638	Tensile Elongation at Yield (%)	12	23	28
D790	Flexural Strength (psi)	7,000	5,400	-
D790	Flexural Modulus (psi)	180,000	160,000	145,000
D695	Compressive Strength (psi)	7,000	6,000	-
D695	Compressive Modulus (psi)	-	-	-
D785	Hardness, Rockwell R	92	80	-
D256	IZOD Notched Impact (ft-lb/in)	1.9	7.5	0.65
THERMAL				
D696	Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F)	6.2	6.6	-
D648	Heat Deflection Temp (°F / °C) at 66 psi at 264 psi	210 / 99 125 / 52	173 / 78 110 / 43	106 / 41 57 / 14
D3418	Melting Temperature (°F / °C)	327 / 164	327 / 164	327 / 164
-	Max Operating Temp (°F / °C)	180 / 82	170 / 77	180 / 82
C177	Thermal Conductivity (BTU-in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C)	0.76-0.81 2.6-2.8	- -	- -
UL94	Flammability Rating	HB	n.r.	V-0
ELECTRICAL				
D149	Dielectric Strength (V/mil) short time, 1/8" thick	500-660	475	500-650
D150	Dielectric Constant at 1 kHz	2.25	2.2-2.36	2.3
D150	Dissipation Factor at 1 kHz	0.0005-0.0018	0.0017	-
D257	Volume Resistivity (ohm-cm) at 50% RH	8.5 x 10 ¹⁴	2 x 10 ¹⁶	10 ¹⁵
D495	Arc Resistance (sec)	160	100	-

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets.

All values at 73°F (23°C) unless otherwise noted.