

TYPICAL PROPERTIES OF POLYPROPYLENE (PP)

ASTM or UL Test	Property	HPP*	HPP-filled	CPP**	CPP-filled
D792	Specific gravity	0.90-0.91	0.97-1.27	0.89-0.91	0.98-1.24
D570	Water absorption (%)	0.01-0.03	0.01-0.09	0.03	0.01-0.02
D638	Tensile strength (psi)	4,500-6,000	3,500-16,000	4,000-5,500	2,500-10,000
D638	Elongation at break (%)	100-600	1.5-80	200-500	2.2-50
D638	Tensile modulus (psi)	16,500-22,500	37,500-100,000	13,000-18,000	5,000-35,000
D790	Flexural modulus (psi)	17,000-25,000	21,000-100,000	13,000-20,000	21,000-96,000
D256	Impact strength, Izod (ft-lb/in of notch)	0.4-1.4	0.6-12	1.1-14	0.6-4.0
D785	Hardness, Rockwell R	80-102	75-117	65-96	81-105
C177	Thermal conductivity (10 ⁻⁴ cal-cm/sec-cm ² -°C)	2.8	2.4-9	3.5-4.0	3-9
D696	Coefficient of thermal expansion (10 ⁻⁵ in/in-°C)	8-10	1.5-5	6-10	2-6
D648	Deflection temperature (°F)				
	At 264 psi	120-140	130-330	120-140	116-280
	At 66 psi	225-250	220-300	185-220	170-305
UL 94	UL flammability rating***	HB	HB	HB	HB

*Homopolymer polypropylene **Copolymer polypropylene ***V-2 ... V-1 ... V-0 ... V-5 ... grades available.