

# PP - Polypropylene



A thermoplastic synthetic resin with excellent properties. Including the lightest among all general-purpose plastics. Excellent mechanical properties and outstanding fatigue resistance. Chemical stability is good with exception of strong oxidants i.e. PP does not react with most chemicals. Excellent electrical performance and often used for electrical insulation.

Continuous Use Temperature 90°C/194°F  
 Flame Retardant Grade UL94 HB

**Torsional fracture torque unit: Nm**

Head Type	M2	M3	M4	M5	M6	M8	M10	M12
Hexagon Head		0.1	0.15	0.45	0.53	1.2	3	5.5
Socket Hex Head		0.05	0.1	0.3	0.58	1.1	1.65	-
Slotted Countersunk Head		0.05	0.13	0.35	0.5	0.95	1.1	-
Cross Countersunk Head		0.1	0.15	0.25	0.45	1.25	2.48	-

**Tensile Fracture Load : N**

Head Type	M2	M3	M4	M5	M6	M8	M10	M12
Hexagon Head			247	311	420	882	1292	1739

➔ **The flash (end stump) of the bolt length (L) is less than or equal to 5%**  
 If bolts are used with nuts, we recommend using bolts and nuts of the same material.

➔ **Table contains reference values. These are not guaranteed**  
 Please use a torque wrench for tightening. The recommended tightening torque is 50% of the breaking torque.



## Polypropylene (PP) Properties

Property	Nominal Value	Unit	Test Method
Melt Index	8.6	g/10 min	ISO 1133
Y.I. (Yellow Index)	-3.6		FPC
Flexural Modulus	10,205	kg/cm <sup>2</sup>	ISO 178
IZOD Notched Impact Strength	12	kg·cm/cm	ISO 180
Molding Shrinkage (parallel)	1.9	%	ISO 294-4, 2577
Molding Shrinkage (normal)	1.8	%	ISO 294-4, 2577
Density	0.90 - 0.91	g/cm <sup>3</sup>	ISO 1183
Tensile Strength	30 - 40	MPa	ISO 527-1/-2
Elongation at Break	50 - 300	%	ISO 527-1/-2
Flexural Strength	35 - 50	MPa	ISO 178
Impact Strength (Notched Izod)	3.5 - 5.0	kJ/m <sup>2</sup>	ISO 179/1eA
Heat Deflection Temperature (HDT)	80 - 100	°C	ISO 75-1/-2
Melt Flow Index	3 - 40	g/10 min	ISO 1133
Vicat Softening Point	150 - 170	°C	ISO 306

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