

## RESIN SELECTION GUIDE

Resin Generic Name (symbol)	Some Brand Names	Mechanical Properties			Moldability Characteristics						Relative Cost
		Tensile Strength (psi)	Impact Strength (ft-lb/in)	Heat Deflection (Deg.F)	Warp and Dimensional Accuracy, Molded	Fills Small Features	Voids in Thick Sections	Sink in Thick Sections	Flash	High Temp. Hard on Mold & Ejectors	
Acetal (POM)	Delrin, Celcon	Medium (6,000-22,000)	Medium (0.75-2.0)	Medium-Low (180F-300F)	Fair	Fair	Poor	Good	Good	Fair	Medium
Acrylic (PMMA)	Plexiglass, Acrylite	Medium (2,800-13,000)	Low (0.25-1.0)	Low (180F-215F)	Good	Fair	Excellent	Good	Good	Good	Medium
Acrylonitrile Butadiene Styrene (ABS)	Lustran, Cyclocac	Medium-Low (5,000-12,000)	High (3.0-7.5)	Low (140F-200F)	Good	Fair	Good	Fair	Good	Good	Low
High Density Polyethylene (HDPE)	Dow HDPE, Chevron HDPE	Low (2,900-4,500)	High (80.0)	Low (130F-250F)	Fair	Excellent	Unknown	Poor	Poor	Good	Low
Liquid Crystal Polymer (LCP)	Vectra, Zenite	High (12,000-32,000)	High (10.0)	High (525F)	Excellent	Excellent	Fair	Fair	Good	Fair	High
Low Density Polyethylene (LDPE)	Dow LDPE, Marlex	Low (1,200-4,000)	High (130.0)	Low (130F-190F)	Fair	Good	Poor	Poor	Poor	Good	Low
Nylon 6/6 (PA66)	Zytel, Ultramid	Medium (6,000-29,000)	High (2.0-8.0)	Low (180F-350F)	Fair	Excellent	Good	Fair	Poor	Fair	Medium
Nylon 6/6, glass filled	Zytel, Ultramid	High	Medium	High	Poor	Good	Excellent	Good	Fair	Fair	Medium
Polybutylene Terephthalate (PBT)	Valox, Crastin, Ultradur	Medium (6,000-17,500)	High (1.0-3.0)	Low (200F-420F)	Fair	Fair	Unknown	Fair	Fair	Good	Medium High
Polycarbonate (PC)	Lexan, Makrolon	Medium (9,000-23,000)	High (2.0-18.0)	Medium High (150F-300F)	Good	Fair	Fair to Good	Fair	Good	Good	Medium High
Polycarbonate / ABS (PC/ABS)	Cycloy, Bayblend	Medium (6,400-18,000)	High (8.0-12.0)	Medium (140F-210F)	Good-Excellent	Fair	Good	Fair	Good	Good	Medium
PolyEtherEtherKeytone (PEEK)	Lubricomp, Thermocomp, Luvocom, Plaslube, Victrex	High (13,000-30,000)	High (3.5-4.5)	High (300F-625F)	Excellent	Good	Good	Good	Good	Fair	High
PolyEtherImide (PEI)	Lubricomp, Thermocomp, Ultem	High (14,000-28,000)	High (1.0-2.0)	High (350F-420F)	Excellent	Good	Good	Good	Good	Fair	High
Thermoplastic Polyesther (PET)		Medium High (7,000-23,000)	Medium (0.5-8.0)	Medium High (250F-470F)	Good	Fair	Good	Good	Good	Good	Medium
CoPolyester (PETG)	Tritan	Medium (7,250)	High (3.0)	Low (185F)	Good	Fair	Fair	Fair	Good	Good	High
Polyphenylene Ether (PPE)	Noryl, Hiloy	Medium (8,500)	Medium-High (2.5-8.0)	Medium (250F-280F)	Good	Good	Fair	Fair	Fair	Good	Medium High
Polyphenylene Sulfide (PPS)	Ryton, Luvotech	Medium-High (14,000-28,000)	High (0.5-6.0)	High (400F-500F)	Excellent	Fair	Good	Good	Fair	Poor	High
Polypropylene, Homopolymer & Copolymer (PP&COPP)	Maxxam, Profax	Low (3,900-18,500)	High (0.5-5.5)	Low (120F-300F)	Fair	Excellent	Poor	Poor	Poor	Good	Low
Polystyrene (HIPS)	Styron, Avantra, Polstyrol	Medium-Low (4,200-11,000)	Low (0.25-7.0)	Low (185F-190F)	Good	Good	Unknown	Fair	Fair	Good	Low
Polysulfone (PSU)	Udel, Ultrason	High (9,500-18,000)	Medium (0.5-7.0)	High (300F-350F)	Good	Good	Fair	Fair	Good	Fair	High
Thermoplastic Elastomer (TPE)	Isoplast, Santoprene	Low (1,000-7,000)	High (NA)	Low (200F-300F)	Poor	Excellent	Excellent	Good	Poor	Excellent	Medium-Low

Notes: This is a general listing, as there are many other resins not listed.