

Typical Steel Properties For Injection Molding Tools

Properties	Carbon steel	Alloy steel	Stainless steels	Tool steels
Density (kg/m ³)	7850	7850	7750 – 8100	7720 – 8000
Elastic Modulus (GPa)	190-210	190 -210	190 – 210	190 – 210
Melting Point (oC)	1425 – 1540	1415 – 1432	1371-1510	1400 -1425
Tensile Strength (MPa)	276 – 1882	756 – 1882	515 – 827	640 – 2000
Hardness (Brinell 3000kg)	86 – 388	149 – 627	137 – 595	210 – 620
Yield Strength (MPa)	186 – 758	366 – 1793	207 – 552	380 – 440
Thermal Expansion (10 ⁻⁶ /K)	11 – 16.6	9.0 – 15	9.0 20.7	9.4 – 15.1
Thermal Conductivity (W/m.K)	24.3 – 65.2	26 – 48.6	11.2 – 36.7	19.9 – 48.3

This chart for typical steel properties for injection mold tools is to be used for reference only and is public information. Plastics Plus Technology Inc and its partners are not responsible for decisions made based on this information alone.