



INTEGRITY

PUMP & MOTOR

GROUP, LLC

Material Hardness

**Castings
Shafting**

Metal	Tensile Strength (PSI)	Brinell Hardness Range
Cast Iron	30,000 - 50,000	190 - 280
Ductile Iron	60,000	132
SAE 40 Bronze	26,000 - 42,000	60 - 80
Aluminum Bronze	80,000	150 - 250
Nickel Aluminum Bronze	85,000	159
304 Stainless Steel	85,000 - 125,000	212 - 277
316 Stainless Steel	80,000 - 90,000	150 - 190
Monel K 500	140,000	260
Duplex 2205	90,000	290
Alloy 20	80,000	200
1045 Steel	80,000 - 120,000	160 - 240
416 Stainless Steel	75,000 - 135,000	155 - 260
17-4 PH Stainless Steel	145,000 - 200,000	311 - 420

Physical properties, including tensile strength and hardness, can vary with heat-treating, cold-working or changing the percentages of chemical elements. Some metals with a low hardness value still have excellent wear characteristics.

Chemical resistance charts should be reviewed before making a final selection on materials for your application.