



Ductile Iron Mechanical Properties(ASTM A536)

Grade	Heat Treatment	Tensile Strength	Yield Strength	% Elongation (min. 2 in.)	Brinell Hardness	Poisson's Ratio	Tensile Elastic Modulus
60-40-18	1	60,000 psi (413 MPa)	40,000 psi (276 MPa)	18	149-187	0.28	24.5 Msi (169 GPa)
65-45-12	2	65,000 psi (448 MPa)	45,000 psi (310 MPa)	12	170-207	0.28	24.5 Msi (169 GPa)
80-50-06	2	80,000 psi (551 MPa)	55,000 psi (379 MPa)	6	187-255	0.28	24.5 Msi (169 GPa)
100-70-03	3	100,000 psi (689 MPa)	70,000 psi (482 MPa)	3	217-269	0.28	25.5 Msi (176 GPa)
120-90-02	4	120,000 psi (828 MPa)	90,000 psi (620 MPa)	2	240-300	0.28	25.5 Msi (176 GPa)

Property Comparisons for Ductile Iron Grades (ASTM A536)

Grade	Tensile Strength	Min. 0.2% Yield Strength	% Elongation (in 50 mm)	Brinell Hardness
250	36.2 ksi (250 MPa)	25.3 ksi (175 MPa)	3.0	179 max
300	43.5 ksi (300 MPa)	30.4 ksi (210 MPa)	1.5	143-207
350	50.7 ksi (350 MPa)	35.5 ksi (245 MPa)	1.0	163-229
400	58.0 ksi (400 MPa)	40.6 ksi (280 MPa)	1.0	197-255
450	65.2 ksi (450 MPa)	45.6 ksi (315 MPa)	1.0	207-269