

Ductile Iron grade 80-55-06

Categories: [Metal](#); [Ferrous Metal](#); [Cast Iron](#); [Alloy Cast Iron](#); [Ductile Iron](#)

Material Notes: Carbon represents the total carbon in the above composition. Cerium is an optional constituent in ductile iron. Most ductile irons are specified based on mechanical properties and have loosely defined compositions. For example, 80-55-06 ductile iron is specified to have a minimum tensile strength of 80 ksi (552 MPa), a yield strength of 55 ksi (379 MPa) and an elongation of 6%. Ferritic/pearlitic, as cast. Applications include crankshafts, gears and rollers. Hardness and machinability data provided by manufacturer/supplier, Siltin Industries, Inc.

Key Words: UNS F33800, ASTM A536, ferritic, pearlitic, crankshafts, gears, rollers

Vendors: [Click here to view all available suppliers for this material.](#)

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Mechanical Properties	Metric	English	Comments
Hardness, Brinell	187 - 269	187 - 269	for 80-55-06 T-4 ductile iron.
Hardness, Knoop	254	254	Converted from Brinell hardness.
Hardness, Rockwell C	16.7	16.7	Approximated. Converted from Brinell hardness.
Hardness, Vickers	240	240	Converted from Brinell hardness.
Tensile Strength, Ultimate	>= 552 MPa	>= 80100 psi	
Tensile Strength, Yield	>= 379 MPa	>= 55000 psi	
Elongation at Break	6.00 %	6.00 %	In 50 mm.
Machinability	0.0 %	0.0 %	Good machinability. No numerical rating available.

Material Components Properties	Metric	English	Comments
Carbon, C	3.60 - 3.80 %	3.60 - 3.80 %	
Cerium, Ce	0.0050 - 0.20 %	0.0050 - 0.20 %	
Chromium, Cr	0.030 - 0.070 %	0.030 - 0.070 %	
Copper, Cu	0.15 - 1.0 %	0.15 - 1.0 %	
Iron, Fe	90.738 - 94.175 %	90.738 - 94.175 %	
Magnesium, Mg	0.030 - 0.060 %	0.030 - 0.060 %	
Manganese, Mn	0.15 - 1.0 %	0.15 - 1.0 %	
Molybdenum, Mo	0.010 - 0.10 %	0.010 - 0.10 %	
Nickel, Ni	0.050 - 0.20 %	0.050 - 0.20 %	
Phosphorous, P	<= 0.030 %	<= 0.030 %	
Silicon, Si	1.80 - 2.80 %	1.80 - 2.80 %	
Sulfur, S	<= 0.0020 %	<= 0.0020 %	

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's disclaimer and terms of use regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.