

Ductile Iron grade 100-70-03

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, 100-70-03 ductile iron is specified to have a minimum tensile strength of 100 ksi (689 MPa), a yield strength of 70 ksi (483 MPa) and an elongation of 3%. Mostly pearlitic, may be normalized. Applications include high-strength gears and machine components, best combination of strength, wear resistance and response to surface hardening.

Key Words: UNS F34800, pearlitic, high-strength gears, wear resistant, surface hardened

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	>= 689 MPa	>= 99900 psi	
Tensile Strength, Yield	>= 483 MPa	>= 70100 psi	
Elongation at Break	3.00 %	3.00 %	In 50 mm.

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.