AISI 1340 Steel

Physical Properties	Metric	English	Comments
Density	7.87 g/cc	0.284 lb/in³	Typical for steel

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	207	207	
Hardness, Knoop	229	229	Converted from Brinell
Hardness, Rockwell B	93	93	Converted from Brinell
Hardness, Rockwell C	15	15	Converted from Brinell
Hardness, Vickers	217	217	Converted from Brinell
Tensile Strength, Ultimate	703 MPa	102000 psi	
Tensile Strength, Yield	434 MPa	62900 psi	
Elongation at Break	25.5 %	25.5 %	in 50 mm
Reduction of Area	57.3 %	57.3 %	
Modulus of Elasticity	200 GPa	29000 ksi	Typical for steel
Bulk Modulus	160 GPa	23200 ksi	Typical for steel
Poissons Ratio	0.29	0.29	Typical For Steel
Machinability	50 %	50 %	Based on 100% machinability for AISI 1212 steel.
Shear Modulus	80.0 GPa	11600 ksi	Typical for steel
Izod Impact	46.0 J	33.9 ft-lb	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000174 ohm-cm	0.0000174 ohm-cm	Typical steel

Thermal Properties	Metric	English	Comments
CTE, linear	11.5 µm/m-°C @Temperature 20.0 °C	6.39 µin/in-°F @Temperature 68.0 °F	Typical steel
	12.2 µm/m-°C @Temperature 0.000 - 300 °C	6.78 µin/in-°F @Temperature 32.0 - 572 °F	Typical for steel
	13.9 µm/m-°C @Temperature 0.000 - 500 °C	7.72 µin/in-°F @Temperature 32.0 - 932 °F	Typical for steel
Specific Heat Capacity	0.472 J/g-°C	0.113 BTU/lb-°F	Typical steel
Thermal Conductivity	51.9 W/m-K	360 BTU-in/hr-ft²-°F	Typical steel

Component Elements Properties	Metric	English	Comments
Carbon, C	0.38 - 0.43 %	0.38 - 0.43 %	
Iron, Fe	97.25 - 97.87 %	97.25 - 97.87 %	As remainder
Manganese, Mn	1.6 - 1.9 %	1.6 - 1.9 %	
Phosphorus, P	<= 0.035 %	<= 0.035 %	
Silicon, Si	0.15 - 0.35 %	0.15 - 0.35 %	
Sulfur, S	<= 0.040 %	<= 0.040 %	