

Material: AISI 1045

Standard Specification For Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel and Bar

Group: Ferrous Mild Steel Alloys

Sub Group: AISI 1045 Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel and Bar

Application: Intended for Valve, Pump, General Engineering, Automotive and Other Industries

Grade Belongs to the Industry: Steel and Bar

Chemical Composition			Heat Treatment	
Carbon	C %	0.430 - 0.500	As Raw or Annealing or Normalizing or Hardening and Tempering	
Manganese	Mn %	0.600 - 0.900		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.050 max.		
Boron	B %	0.0005 - 0.003		
Copper	Cu %	0.200 max.		
Niobium	Nb %	0.015 max.		
Silicon	Si %	0.100 max.		
Vanadium	V %	0.020 max.		
Iron	Fe %	Balance		
-	-	-	Mechanical Properties Tensile Strength in Mpa 480 - 862 Yield Strength in Mpa 240 min. Elongation in % 5 min. Reduction of Area in % 30 min. Hardness in HB 163 - 321 Impact in Joule -	
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-	-	-		
-	-	-		
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
G10450	UNS	USA	Bars, Wire Rods, Plates, Strip, Sheets and Tubing
1045	SAE	USA	Bars, Wire Rods, Plates, Strip, Sheets and Tubing
A 311 1045 Class A	ASTM	USA	Steel and Bar
A 311 1045 Class B	ASTM	USA	Steel and Bar
A 830 G10450	ASTM	USA	Plate and Steel
A 827 1045	ASTM	USA	Plate, Steel and Forging
A 682 Grade 1045	ASTM	USA	Steel and Strip

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