

Material: AS 1045

Standard Specification for Carbon Steels and Carbon-Manganese Steel

Group: Ferrous Mild Steel Alloys

Sub Group: AS 1045 Carbon Steels and Carbon-Manganese Steel

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

Grade Belongs to the Industry: Bar, Wire, Tube and Forging

Chemical Composition			Heat Treatment	
Carbon	C %	0.430 - 0.500	As- Cast or Normalizing or Annealing or Hardening + Tempering	
Silicon	Si %	0.100 - 0.350		
Manganese	Mn %	0.600 - 0.900		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.040 max.		
Chromium	Cr %	0.300 max.		
Nickel	Ni %	0.350 min.		
Molybdenum	Mo %	0.100 max.		
Copper	Cu %	0.350 max.		
Iron	Fe %	Balance	Mechanical Properties Tensile Strength in Mpa 570 - 862 Yield Strength in Mpa 310 min. Elongation in % 10 min. Reduction of Area in % 35 - 45 Hardness in HB 163 - 321 Impact in Joule -	
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
A915 Grade SC 1045	ASTM	USA	Casting
J04502	UNS	USA	Bar, Wire, Tube and Forging
1045	AISI	USA	Bar, Wire, Tube and Forging
1045	AMS	USA	Bar, Wire, Tube and Forging
1045	AMS	USA	Bar, Wire, Tube and Forging
A 108 1045	ASTM	USA	Bar, Wire, Tube and Forging
A 29 1045	ASTM	USA	Bar, Wire, Tube and Forging

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