Material - AS 4140

Standard Specification for Alloy Steels - Hardened and Tempered

Group - Ferrous Mild Steel Alloys

Sub Group - AS 4140 Alloy Steels - Hardened and Tempered

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

Grade Belongs to the Industry - Bar, Wire, Tube and Forging		
Chemical Composition		
Carbon	C %	0.370 - 0.440
Silicon	Si %	0.100 - 0.350
Manganese	Mn %	0.650 - 1.100
Phosphorus	P %	0.040 max.
Sulphur	S %	0.040 max.
Chromium	Cr %	0.750 - 1.200
Nickel	Ni %	0.350 max.
Molybdenum	Mo %	0.150 - 0.300
Copper	Cu %	0.350 max.
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
As- Cast or Normalising or Annealing or Hardening + Tempering

Mechanical Properties	
Tensile Strength in Mpa	700 - 1230
Yield Strength in Mpa	480 min.
Elongation in %	9 min.
Reduction of Area in %	-
Hardness in HB	201 - 375
Impact in Joule	22 J @ RT

Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
A915 Grade SC 4140	ASTM	USA	Casting
J1405	UNS	USA	Bar, Wire, Tube and Forging
4140	AISI	USA	Bar, Wire, Tube and Forging
4140	SAE	USA	Bar, Wire, Tube and Forging
4140	AMS	USA	Bar, Wire, Tube and Forging
A 29 4140	ASTM	USA	Bar, Wire, Tube and Forging
A 505 4140	ASTM	USA	Bar, Wire, Tube and Forging

+91-99090 45075 info@icastllp.com
ICAST ALLOYS LLP, Plot 2527, Road H1, Kranti Gate, GIDC Metoda, Lodhika, Rajkot-360021, Gujarat, India