

# Material: ASTM A 29 1046

## Standard Specification for Steel Castings for General Engineering Purposes

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** ASTM A 29 1046 Steel Castings for General Engineering Purposes

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

**Grade Belongs to the Industry:** Casting

Chemical Composition		
Carbon	C %	0.430 - 0.500
Manganese	Mn %	0.700 - 1.000
Phosphorus	P %	0.040 max.
Sulphur	S %	0.050 max.
Boron	B %	0.0005 - 0.0030
Copper	Cu %	0.200 max.
Aluminium	Al %	0.020 max.
Copper	Cu %	0.200 max.
Niobium	Nb %	0.015 max.
Vanadium	V %	0.020 max.
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
As Cast or Annealing or Normalizing or Hardening and Tempering

Mechanical Properties	
Tensile Strength in Mpa	590 - 650
Yield Strength in Mpa	320 min.
Elongation in %	12 min.
Reduction of Area in %	35 - 45
Hardness in BHN	170 - 187
Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
AW2	BS	British	Casting
1046	SAE	USA	Casting
1046	AISI	USA	Casting
A 1040 1046	ASTM	USA	Casting
A 510 1046	ASTM	USA	Casting
A 576 1046	ASTM	USA	Casting
A 830 1046	ASTM	USA	Casting

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