

# Material: BS 735 A 51

## Standard Specification for Steels for Mechanical and Allied Engineering Purposes

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** BS 735 A 51 Steels for Mechanical and Allied Engineering Purposes

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

**Grade Belongs to the Industry:** Hot Formed Spring

Chemical Composition		
Carbon	C %	0.480 - 0.540
Silicon	Si %	0.200 - 0.350
Manganese	Mn %	0.700 - 1.000
Phosphorus	P %	0.035 max.
Sulphur	S %	0.035 max.
Chromium	Cr %	0.900 - 1.200
Vanadium	V %	0.100 - 0.200
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
Annealing or Normalizing or Hardening + Tempering

Mechanical Properties	
Tensile Strength in Mpa	621 min.
Yield Strength in Mpa	345 min.
Elongation in %	20 min.
Reduction of Area in %	-
Hardness in HB	277 max.
Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
1606.0000	SS	Sweden	Casting
50 CD 4-M	AFNOR NF	France	Casting
5152	SAE	USA	Steel
1050	AISI	USA	Forging, Bar, Wire, and Shape
C 3	MSZ	Hungary	Steel
C48GW-N-A	JIS	Japan	Forging
A732 4A	ASTM	USA	Casting

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Customer Care: +91-99090 45075 Email: [info@icastllp.com](mailto:info@icastllp.com)



+91-99090 45075



[info@icastllp.com](mailto:info@icastllp.com)



ICAST ALLOYS LLP, Plot 2527, Road H1, Kranti Gate, GIDC Metoda, Lodhika, Rajkot-360021, Gujarat, India