



## Material - UNS R31233

### Standard Specification for Cobalt-Chromium-Nickel-Molybdenum-Tungsten Alloy Rod

Group - Non-Ferrous Nickel Alloys

Sub Group - UNS R31233 Cobalt-Chromium-Nickel-Molybdenum-Tungsten Alloy Rod

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

Grade Belongs to the Industry - Rod

Chemical Composition			Heat Treatment	
Carbon	C %	0.020 - 0.100	As-Cast or Annealing or Age Hardning	
Silicon	Si %	0.050 - 1.000		
Manganese	Mn %	0.100 - 1.500		
Chromium	Cr %	23.500 - 27.500		
Sulphur	S %	0.020 max.		
Molybdenum	Mo %	4.000 - 6.000		
Phosphorus	P %	0.030 max.		
Boron	B %	0.015 max.		
Iron	Fe %	1.000 - 5.000	Mechanical Properties	
Nickel	Ni %	7.000 - 11.000	Tensile Strength in Mpa	896 min.
Nitrogen	N %	0.030 - 0.120	Yield Strength in Mpa	379 min.
Tungsten	W %	1.000 - 3.000	Elongation in %	15 min.
Cobalt	Co %	Balance	Reduction of Area in %	-
-	-	-	Hardness in BHN	-
-	-	-	Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
B 815 R31233	ASTM	USA	Rod
B 818 R31233	ASTM	USA	Plate, Sheet and Strip
SB-815 R31233	ASME	USA	Rod
SB-818 R31233	ASME	USA	Plate, Sheet and Strip
-	-	-	-
-	-	-	-
-	-	-	-

**Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email [marketing@gravitycastindia.com](mailto:marketing@gravitycastindia.com)**

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