

# Material: UNS J82090

## Standard Specification for Alloy Steel Casting

**Group:** Ferrous Stainless Steel Alloys

**Sub Group:** UNS J82090 Alloy Steel Casting

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

**Grade Belongs to the Industry:** Casting

Chemical Composition			Heat Treatment	
Carbon	C %	0.200 max.	Normalizing or Annealing or Hardening + Tempering	
Silicon	Si %	1.000 max.		
Manganese	Mn %	0.350 - 0.650		
Phosphorus	P %	0.035 max.		
Sulphur	S %	0.035 max.		
Chromium	Cr %	8.000 - 10.000		
Molybdenum	Mo %	0.9000 - 1.200		
Nickel	Ni %	0.500 max.		
Tungsten	W %	0.100 max.		
Copper	Cu %	0.500 max.		
Iron	Fe %	Balance	<b>Mechanical Properties</b> Tensile Strength in Mpa      620 - 795 Yield Strength in Mpa      415 min. Elongation in %      18 min. Reduction of Area in %      35 min. Hardness in BHN      - Impact in Joule      -	
-	-	-		
-	-	-		
-	-	-		
-	-	-		
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
SA-217 Grade C12	ASME	USA	Casting
A426 Grade CP9	ASTM	USA	Casting
G X 12 CrMo 10-1	DIN	Germany	Casting
1.7389	DIN	Germany	Casting
A217 Grade C12	ASTM	USA	Casting
A217 Grade C12A	ASTM	USA	Casting
A217 J84090	ASTM	USA	Casting

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