

# Material: ASME SA-217 Grade C12

## Standard Specification for Martensitic Stainless Steel and Alloy Steel Castings for Pressure Containing Parts Suitable for High Temperature Service

**Group:** Ferrous Stainless Steel Alloys

**Sub Group:** ASME SA-217 Grade C12 Martensitic Stainless Steel and Alloy Steel Castings for Pressure Containing Parts Suitable for High Temperature Service

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

**Grade Belongs to the Industry:** Casting

Chemical Composition		
Carbon	C %	0.200 max.
Silicon	Si %	1.000 max.
Manganese	Mn %	0.350 - 0.650
Phosphorus	P %	0.040 max.
Sulphur	S %	0.045 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
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
Normalizing or Annealing or Hardening + Tempering

Mechanical Properties	
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	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
J82090	UNS	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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