



**GRAVITY CAST PVT. LTD.**  
GRAVITY GROUP OF COMPANIES

## 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			Heat Treatment	
Carbon	C %	0.200 max.	Normalising or Annealing or Hardening + Tempering	
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.	<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      -	
Tungsten	W %	0.100 max.		
Copper	Cu %	0.500 max.		
Iron	Fe %	Balance		
-	-	-		
-	-	-		
-	-	-		
-	-	-		

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

**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)**

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy option rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of business.

**ONE STOP SOLUTION FOR METAL PARTS**