



GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASTM A217 Grade C12A

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

Group - Ferrous Mild Steel Alloys

Sub Group - ASTM A217 / A217M Steel Castings, Martensitic Stainless and Alloy, 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 %	0.080 - 0.120	Normalising or Annealing or Hardening + Tempering	
Silicon	Si %	0.200 - 0.500		
Manganese	Mn %	0.300 - 0.600		
Phosphorus	P %	0.025 max.		
Sulphur	S %	0.010 max.		
Chromium	Cr %	8.000 - 9.500		
Nickel	Ni %	0.400 max.		
Molybdenum	Mo %	0.850 - 1.050		
Vanadium	V %	0.180 - 0.250		
Nitrogen	N %	0.030 - 0.070		
Niobium	Nb %	0.060 - 0.100	Mechanical Properties Tensile Strength in Mpa 585 - 760 Yield Strength in Mpa 415 min. Elongation in % 18 min. Reduction of Area in % 45 min. Hardness in BHN - Impact in Joule -	
Aluminium	Al %	0.020 max.		
Titanium	Ti %	0.010 max.		
Zirconium	Zr %	0.010 max.		
Iron	Fe %	Balance		

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
J84090	UNS	USA	Casting
1.4903	DIN	Germany	Steel
A234 Grade WP91	ASTM	USA	Pipe
A336 Grade F91	ASTM	USA	Forging
TUZ 10 CDVNb 09-01	AFNOR NF	France	Tube
X 10 CrMoVNb 9-1	DIN	Germany	Steel
J80490	UNS	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

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.

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