



## Material - AFNOR NF TUZ 10 CDVNb 09-01

### Standard Specification for Seamless Steel Tubes for Pressure Purposes

Group - Ferrous Stainless Steel Alloys

Sub Group - AFNOR NF TUZ 10 CDVNb 09-01 Seamless Steel Tubes for Pressure Purposes

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

Grade Belongs to the Industry - Tube

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 %	0.020 max.		
Sulphur	S %	0.010 max.		
Chromium	Cr %	8.000 - 9.500		
Molybdenum	Mo %	0.850 - 1.050		
Nickel	Ni %	0.400 max.		
Vanadium	V %	0.180 - 0.250		
Niobium	Nb %	0.060 - 0.100		
Copper	Cu %	0.250 max.	Mechanical Properties	
Tin	Sn %	0.030 max.	Tensile Strength in Mpa	585 - 770
Iron	Fe %	Balance	Yield Strength in Mpa	415 min.
-	-	-	Elongation in %	20 min.
-	-	-	Reduction of Area in %	-
-	-	-	Hardness in BHN	-
-	-	-	Impact in Joule	40 J @ RT

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
1.4903	UNS	USA	Casting
A234 Grade WP91	ASTM	USA	Pipe
A336 Grade F91	ASTM	USA	Forging
J84090	UNS	USA	Steel
X 10 CrMoVNb 9-1	DIN	Germany	Steel
J80490	UNS	USA	Casting
A217 Grade C12A	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)**

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