



## Material - SAE 321

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

Group - Ferrous Stainless Steel Alloys

Sub Group - SAE 321 Seamless Steel Tubes for Pressure Purposes

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

Grade Belongs to the Industry - Steel

Chemical Composition			Heat Treatment	
Carbon	C %	0.080 max.	Solution Annealing	
Silicon	Si %	1.000 max.		
Manganese	Mn %	2.000 max.		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.030 max.		
Chromium	Cr %	17.000 - 20.000		
Nickel	Ni %	9.000 - 12.000		
Titanium	Ti %	0.700 max.		
Copper	Cu %	0.750 max.		
Nitrogen	N %	0.100 max.		
Iron	Fe %	Balance	<b>Mechanical Properties</b> Tensile Strength in Mpa      517 - 965 Yield Strength in Mpa      206 - 758 Elongation in %      15 min. Reduction of Area in %      40 min. Hardness in HB      140 - 255 Impact in Joule      64.7 J @ RT	
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-	-	-		
-	-	-		
-	-	-		
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
1.4541	EN	European Union	Tube
1.4541	DIN	Germany	Steel
1.4541	DIN	Germany	Steel
04Ch18N10	GOST	Russia	Steel
304S11	BS	British	Steel and Bar
X6CrNiTi18 10	DIN	Germany	Steel
X6CrNiTi18-10	AFNOR NF	France	Steel

**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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