GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASTM A213 TP316N

Standard Specification for Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes

Group - Ferrous Stainless Steel Alloys

Sub Group - ASTM A213 TP316N Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes

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

Grade Belongs to the Industry - Steel Tubes

Chemical Composition		
Carbon	C %	0.080 max.
Manganese	Mn %	2.000 max.
Phosphorus	P %	0.045 max.
Sulphur	S %	0.030 max.
Silicon	Si %	1.000 max.
Chromium	Cr %	16.000 - 18.000
Nickel	Ni %	10.000 - 13.000
Molybdenum	Mo %	2.000 - 3.000
Nitrogen	N %	0.100 - 0.160
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
Solution Annealing

Mechanical Properties	
Tensile Strength in Mpa	550 min.
Yield Strength in Mpa	240 min.
Elongation in %	35 min.
Reduction of Area in %	-
Hardness in HBW	192 max.
Impact in Joule	-

Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
S31651	UNS	USA	Steel and Pipe
SA-688 TP 316N	ASME	USA	Steel and Tubing
SA-376 TP316	ASME	USA	Steel and Pipe
A 943 TP316N	ASTM	USA	Steel and Pipe
A 988 S31651	ASTM	USA	Steel
A 194 Grade 8MNA	ASTM	USA	Steel
A 666 Type 316N	ASTM	USA	Bars, Plate, Sheet and Strip

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.