

SS 316N, Type 316N, UNS S31651, AISI 316N, ASTM 316N, Grade 316N

Introduction :

Stainless Steel 316N is the standard molybdenum-bearing steel grade. It provides excellent forming and welding characteristics. In variety of parts for applications in the industrial, architectural, and transportation fields it readily brake or roll formed. It also has outstanding welding characteristics. While welding thin sections post-weld annealing is not required. The molybdenum gives 316N better overall corrosion resistant properties than Grade 304, particularly higher resistance to pitting and crevice corrosion in chloride environments. It is excellent in a range of atmospheric environments and many corrosive media. In warm chloride environment subject to pitting and crevice corrosion and to stress corrosion cracking above about 60°C. It is usually regarded as the standard “marine grade stainless steel”, but it is not resistant to warm sea water. 316N does exhibit surface corrosion, usually visible as brown staining in many marine environments. It provides good oxidation resistance in intermittent service to 870°C and in continuous service to 925°C.

Products Available in forms :

- SS 316N, Type 316N, UNS S31651, AISI 316N Plates
- SS 316N, Type 316N, UNS S31651, AISI 316N Pipes
- SS 316N, Type 316N, UNS S31651, AISI 316N Round Bar
- SS 316N, Type 316N, UNS S31651, AISI 316N Tube
- SS 316N, Type 316N, UNS S31651, AISI 316N Flanges
- SS 316N, Type 316N, UNS S31651, AISI 316N Wire
- SS 316N, Type 316N, UNS S31651, AISI 316N Fittings

Standard Available in forms :

- ASTM A182/ ASME SA182 Stainless Steel Pipe Fittings
- ASTM A213 / ASME SA213 Seamless Stainless Steel Pipes
- ASTM A240/ ASME SA240 Stainless Steels Sheets / Plates
- ASTM A249/ ASME SA249 Stainless Steel Welded Tubes
- ASTM A269/ ASME SA269 Stainless Steel Tubes
- ASTM A270/ ASME SA270 Stainless Steel Sanitary Tubes
- ASTM A312/ ASME SA312 Stainless Steel Pipes
- ASTM A403/ ASME SA403 Stainless Steel Pipe Fittings
- ASTM A554/ ASME SA554 Stainless Steel Welded Tubes
- ASTM A731/ ASME SA731 Stainless Steel Pipes
- ASTM A789/ ASME SA789 Stainless Steel Tubes
- ASTM A790/ ASME SA790 Stainless Steel Pipes
- ASTM A791/ ASME SA791 Stainless Steel Tubes

Chemical Composition

	TYPE 316N	UNS S31651	AISI 316N	ASTM 316N	GRADE 316N
Carbon	0.08 max	0.08 max	0.08 max	0.08 max	0.08 max
Manganese	2.00 max	2.00 max	2.00 max	2.00 max	2.00 max
Phosphorus	0.045 max	0.045 max	0.045 max	0.045 max	0.045 max
Sulfur	0.030 max	0.030 max	0.030 max	0.030 max	0.030 max
Silicon	1.00 max	0.75 max	0.75 max	0.75 max	0.75 max
Chromium	16.0-18.0	16.0-18.0	16.0-18.0	16.0-18.0	16.0-18.0
Nickel	10.0-14.0	10.0-14.0	10.0-14.0	10.0-14.0	10.0-14.0
Nitrogen*	0.10-0.16	0.10-0.16	0.10-0.16	0.10-0.16	0.10-0.16
Molybdenum	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0
Copper	-	-	-	-	-

Mechanical Properties

	TYPE 316N	UNS S31651	AISI 316N	ASTM 316N	GRADE 316N
Tensile Strength, Mpa	550	550	550	550	550
Yield Strength, Mpa	240	240	240	240	240
Elongation in 2" [50mm] %	35	35	35	35	35
Reduction in Area %	-	-	-	-	-
Hardness, Rockwell B	95	95	95	95	95



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