

## SS 430 Nb, Type 430 Nb, WNR 1.4511, AISI 430 Nb

### Introduction :

Stainless steel grade 430Nb is a ferritic group of steels. It is a non-hardenable steel which contains chromium. Grade 430Nb stainless steel provides good corrosion resistance and formability, also practical mechanical properties. Due to its resistance to nitric acid, 430Nb Grade can be used in certain chemical applications. Grade 430Nb has excellent stress corrosion cracking resistance. It is capable of resisting oxidation up to 870°C in intermittent usage and up to 815°C in continuous usage. At room temperature, 430Nb stainless steel has the tendency to become brittle, especially when it gets heated for a long time between the ranges of 400-600°C. Stainless steel grade 430 is heated in the range of 815 - 845°C for solution annealing. Then it has to be slow chamber cooled to 600°C [1112°F] and followed by air-cooling in an extremely fast manner - as slow cooling between 540 and 400°C [1004 and 752°F] tends to cause embrittlement. For sub-critical hardening, heating ought to be performed to 760-815°C [1400-1499°F], followed by water quenching or air-cooling. By thermal treatment 430 stainless steel cannot be hardened. Stainless steel grade 430 has to be pre-heated at 150-200°C to perform any welding. The particular area can be post-weld annealed at 790-815°C, in case of embrittlement in the welded metal. Stainless steel grade 430 machinability is a lot easier than standard austenitic steels such as grade 304.

### Products Available in forms :

- SS 430 Nb, Type 430 Nb, WNR 1.4511, AISI 430 Nb Plates
- SS 430 Nb, Type 430 Nb, WNR 1.4511, AISI 430 Nb Pipes
- SS 430 Nb, Type 430 Nb, WNR 1.4511, AISI 430 Nb Round Bar
- SS 430 Nb, Type 430 Nb, WNR 1.4511, AISI 430 Nb Tube
- SS 430 Nb, Type 430 Nb, WNR 1.4511, AISI 430 Nb Flanges
- SS 430 Nb, Type 430 Nb, WNR 1.4511, AISI 430 Nb Wire
- SS 430 Nb, Type 430 Nb, WNR 1.4511, AISI 430 Nb 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

	SS 430 Nb	Type 430 Nb	WNR 1.4511	AISI 430 Nb
Carbon	0.050 max	0.050 max	0.050 max	0.050 max
Manganese	1.00 max	1.00 max	1.00 max	1.00 max
Phosphorus	0.040 max	0.040 max	0.040 max	0.040 max
Sulfur	0.015 max	0.015 max	0.015 max	0.015 max
Silicon	1.00 max	1.00 max	1.00 max	1.00 max
Chromium	16.0-18.0	16.0-18.0	16.0-18.0	16.0-18.0
Others	Nb; 0.30-0.60	Nb; 0.30-0.60	Nb; 0.30-0.60	Nb; 0.30-0.60



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