

SS 304LN, Type 304LN, WNR 1.4311, UNS S30453, AISI 304LN, Grade 304LN, AFNOR Z2CN18-10Az, ASTM 304LN

Introduction :

304LN stainless steel grade is a nitrogen-strengthened version of 304 stainless steel grade. By without imparting the ductility nitrogen increases the yield strength of austenitic grade. It has properties such as good resistance to intergranular corrosion in welded condition, excellent fabrication properties, low temperature toughness, high strength and excellent ductility. Stainless steel 304LN is an austenitic in the annealed condition (1000°C - 1100°) and rapid cooling in air or water. It contains little amount of ferrite. 304LN is more stable than grade 304L against martensitic transformation induced by deformation at low temperature.

Chemical Composition

	SS 304LN	TYPE 304LN	WNR 1.4311	UNS S30453	AISI 304LN	GRADE 304LN	AFNOR Z2CN18-10Az	ASTM 304LN
Carbon	0.03 max	0.03 max	0.03 max	0.03 max	0.03 max	0.03 max	0.03 max	0.03 max
Manganese	2.00max	2.00max	-	-	-	-	-	-
Phosphorus	0.045 max	0.045 max	0.045 max	0.045 max	0.045 max	0.045 max	0.045 max	0.045 max
Sulfur	0.03 max	0.03 max	0.03 max	0.03 max	0.03 max	0.03 max	0.03 max	0.03 max
Silicon	2.00 max	2.00 max	2.00 max	2.00 max	2.00 max	2.00 max	2.00 max	2.00 max
Chromium	18.0-20.0	18.0-20.0	18.0-20.0	18.0-20.0	18.0-20.0	18.0-20.0	18.0-20.0	18.0-20.0
Nickel	8.0-12.0	8.0-12.0	8.0-12.0	8.0-12.0	8.0-12.0	8.0-12.0	8.0-12.0	8.0-12.0
Nitrogen	0.1-0.16	0.1-0.16	0.1-0.16	0.1-0.16	0.1-0.16	0.1-0.16	0.1-0.16	0.1-0.16

Mechanical Properties

	SS 304LN	TYPE 304LN	WNR 1.4311	UNS S30453	AISI 304LN	GRADE 304LN	AFNOR Z2CN18-10Az	ASTM 304LN
Tensile Strength (Mpa)psi	(515) 74694	(515) 74694	(515) 74694	(515) 74694	(515) 74694	(515) 74694	(515) 74694	(515) 74694
Yield Strength (Mpa)psi	(205) 29732	(205) 29732	(205) 29732	(205) 29732	(205) 29732	(205) 29732	(205) 29732	(205) 29732
Elongation in 50 mm	40%	40%	40%	40%	40%	40%	40%	40%
Hardness, Rockwell B	95	95	95	95	95	95	95	95

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

Products Available in forms :

- SS 304LN, Type 304LN, WNR 1.4311, UNS S30453, AISI 304LN Plates
- SS 304LN, Type 304LN, WNR 1.4311, UNS S30453, AISI 304LN Pipes
- SS 304LN, Type 304LN, WNR 1.4311, UNS S30453, AISI 304LN Round Bar
- SS 304LN, Type 304LN, WNR 1.4311, UNS S30453, AISI 304LN Tube
- SS 304LN, Type 304LN, WNR 1.4311, UNS S30453, AISI 304LN Flanges
- SS 304LN, Type 304LN, WNR 1.4311, UNS S30453, AISI 304LN Wire
- SS 304LN, Type 304LN, WNR 1.4311, UNS S30453, AISI 304LN 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

Applications

Grade 304LN stainless steel is widely used in the following applications:

- Heat exchangers
- Chemical industry
- Food industry
- Petroleum industry
- Fabrication industry
- Nuclear industry

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Corrosion Resistance

- Grade 304LN stainless has good resistance to atomosperic resistance.
- Like Grade 304L, Grade 304LN is resistant to wide variety if inorganic chemicals as well as nitric acid.
- Grade 304LN has good intergranular corrosion in the as-annealed and as-welded condition due to its low carbon content.
- Some intergranular attack may occur in the hot rolled unannealed condition.



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