

# SS 409Ni, Type 409Ni, UNS S40976, AISI 409Ni, Grade 409Ni

## Introduction :

Stainless Steel 409Ni is a low chromium columbium stabilized ferritic stainless steel with little addition of nickel to boost corrosion resistance and toughness even in welded condition. As compared to 430 or 304 stainless steel it is not resistant to corrosion or high temperature oxidation, but it is still higher to low alloy corrosion resistant steels, mild steel and coated mild steels. When stainless steel 409Ni gets exposed to aggressive atmospheric conditions, staining may occur. 409Ni alloy should only be used where aesthetics is not a prime requirement such as in a mildly corrosive condition. Annealed 409Ni is ductile and doesn't harden to any considerable extent by cold operating. Therefore it can be drawn in to wire and formed in needed shapes using most standard techniques. 409Ni should not be used in cryogenic applications due to a danger of brittle transition and fracture at sub-zero temperature, being a ferritic stainless steel. In automotive applications SS 409Ni finds its major applications.

## Products Available

### in forms :

- SS 409Ni, Type 409Ni, UNS S40976, AISI 409Ni Plates
- SS 409Ni, Type 409Ni, UNS S40976, AISI 409Ni Pipes
- SS 409Ni, Type 409Ni, UNS S40976, AISI 409Ni Round Bar
- SS 409Ni, Type 409Ni, UNS S40976, AISI 409Ni Tube
- SS 409Ni, Type 409Ni, UNS S40976, AISI 409Ni Flanges
- SS 409Ni, Type 409Ni, UNS S40976, AISI 409Ni Wire
- SS 409Ni, Type 409Ni, UNS S40976, AISI 409Ni Fittings

## Chemical Composition

	SS 409Ni	TYPE 409Ni	UNS S40976	AISI 409Ni	GRADE 409Ni
Carbon	0.030 max	0.030 max	0.030 max	0.030 max	0.030 max
Manganese	1.00 max	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	0.040 max
Sulfur	0.030 max	0.030 max	0.030 max	0.030 max	0.030 max
Silicon	1.00 max	1.00 max	1.00 max	1.00 max	1.00 max
Chromium	10.5-11.7	10.5-11.7	10.5-11.7	10.5-11.7	10.5-11.7
Nickel	0.75-1.00	0.75-1.00	0.75-1.00	0.75-1.00	0.75-1.00
Nitrogen*	0.04 max	0.04 max	0.04 max	0.04 max	0.04 max
Niobium	10X(C+N) 0.80	10X(C+N) 0.80	10X(C+N) 0.80	10X(C+N) 0.80	10X(C+N) 0.80

## 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

## Mechanical Properties

	SS 409Ni	TYPE 409Ni	UNS S40976	AISI 409Ni	GRADE 409Ni
Tensile Strength,ksi[Mpa]	65[450]	65[450]	65[450]	65[450]	65[450]
Yield Strength, ksi[Mpa]	35[240]	35[240]	35[240]	35[240]	35[240]
Elongation %	50	50	50	50	50
Reduction in Area, %	70	70	70	70	70
Hardness HRB	130	130	130	130	130



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