

A 286

An iron-based superalloy, A 286 has superior strength up to 538°C and excellent oxidation resistance up to 816°C.

If you need a stainless steel which offers superior strength combined with excellent oxidation resistance at elevated temperatures, then look no further than NeoNickel A 286 stainless steel.

PRODUCT FORMS

PRODUCT FORM	SIZE RANGE FROM	SIZE RANGE TO
A 286 Round bar	9.5 mm	127 mm
A 286 Sheet & plate	0.635 mm	101.6 mm

Can't find the size you need? **Please contact us at onlinesales@neonickel.com**

CHEMICAL ANALYSIS

	CR	NI	MO	CO	VA	AL	TI	B	C	FE	MN	SI	P	S
Min	13.5	24	1	-	0.1	-	1.9	0.003	-	-	-	-	-	-
Max	16	27	1.5	1	0.5	0.35	2.35	0.01	0.08	Balance	2	1	0.025	0.025

APPLICATIONS

- Jet engine components
- High temperature fasteners, springs
- Non-magnetic cryogenic equipment

ABOUT A 286

A-286 alloy is an age-hardenable iron-based superalloy for applications requiring long-term high strength from -195°C-538°C. If short-term high strength properties are acceptable, the alloy can be used between 704-816°C. Oxidation resistance is high for continuous service to 816°C and intermittent to 982°C. Aqueous corrosion resistance of A-286 is comparable to 316/316L stainless grade. Heat treatment according to AMS 5525 requires a solution anneal at 982°C air cool, age at 718°C for 16 hours and then air cool. **For more information on A-286 Stainless Steel [contact us](#), or fill in our online quote form and we'll get right back to you!**

PROPERTIES

Density: 7.94 g/cm³

Melting range: 1287.8 -1348.9 °C

MECHANICAL & PHYSICAL PROPERTIES

MECHANICAL & PHYSICAL PROPERTIES	21°C	93°C	204°C	427°C	537.8°C	649°C	760°C
Coefficient of Thermal Expansion µm/m°C	-	16.6	-	17.3	17.6	17.8	18.5
Modulus of Elasticity / x10 ⁵ MPa	-	-	-	-	1.65	1.52	1.59
Ultimate Tensile Strength/ MPa	999.7	-	986	951.5	903.2	710.2	441.3
0.2% Yield Strength/ MPa	655	-	641.2	641.2	599.8	606.7	427.5
Elongation %	24	-	21	18	18	13	18
Thermal Conductivity kcal/(hr.m.°C)	-	11.9	-	14.6	19.3	21	-

TYPICAL STRESS RUPTURE STRENGTH 982.22/718.33°C

TEMPERATURE, °C	538°C	593°C	649°C
100 hours, ksi	99	81	61
1,000 hours, ksi	88	71	46

SPECIFICATIONS

UNS Number: S66286

W.NR.Number: 1.4980, 1.4943, 1.4944

Standards: AMS 5525, AMS 5732, AMS 5804, BS HR100, BS HR51, M6RR6531, 6532, ASTM A453, A638, AMS 5526, 5731, 5734, 5737