

## Technical datasheet

## Alloy A-286 / W-Nr. 1.4980

Also known as Grade 660, Alloy A-286 is an age-hardenable iron-nickel-chromium alloy with good mechanical properties and oxidation resistance at elevated temperatures used for turbine components and high strength fastener applications

### Available products

**Product form**  
Bar

**Size range from**  
12.7 mm diameter

**Size range to**  
127 mm diameter

### Chemical composition (%)

Ni	Cr	Mo	Ti	Mn	Si	Al	Fe	C
24.0-27.0	13.5-16.0	1.0-1.5	1.90-2.35	2.0 max	1.0 max	0.35 max	Balance	0.08 max

### Major specifications

AMS 5525, 5858, 5726, 5731, 5732, 5734, 5737, 5804, 5853

ASTM A453, A638  
UNS S66286

### Physical properties

Density 7.92 g/cm<sup>3</sup>  
Melting range 1370 - 1435°C

Magnetic permeability  
1.007 in the aged condition

### Mechanical properties – typical room temperature properties

Solution annealed condition  
Yield strength 275 MPa  
Tensile strength 620 MPa  
Elongation 40 %

Age hardened condition  
Yield strength 690 MPa  
Tensile strength 1034 MPa  
Elongation 25 %

### Key attributes

In the age-hardened condition Alloy A-286 has high room temperature strength and maintains good strength at elevated temperatures up to ~700°C. It also has excellent creep strength and these mechanical properties, combined with its oxidation resistance allows A-286 to find use in a wide range of applications where high strength, excellent creep strength and good corrosion resistance are required. Applications include turbine components and high strength, high temperature fasteners. Alloy A-286 is also used in the oil and gas industry both in high temperature applications but also cryogenic applications and where non-magnetic properties are required.

Alloy 600 is highly fabricable and is readily formed by either hot or cold working processes. It is machinable and can be welded by conventional processes and procedures. Please contact us for further details on forming, fabrication and welding consumables.

### Applications

Aero and industrial gas turbine components  
Automotive engine fasteners  
Manifold components  
Offshore/oil and gas industry fasteners  
Cryogenic and non-magnetic applications

Do you require further information or a quotation?

Please contact us...

[info@bibusmetals.com](mailto:info@bibusmetals.com)

[www.bibusmetals.com](http://www.bibusmetals.com)

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