FAGERSTA Stainless

R569.60

EN: **1.4980**
Type: **660**
A286

R569.60 (A286) is an iron based super alloy, designed for applications requiring high strength and corrosion resistance up to 700°C (1290°F). This grade can be age hardened to a high strength level and can be used in high strength nonmagnetic applications because it remains essentially nonmagnetic even after severe cold working. The aqueous corrosion resistance for this grade is comparable to that of the austenitic stainless. Typical applications are wire for bolts, nuts, shafts, springs, and other hardware in jet engines, gas turbines and turbo superchargers.

CHEMICAL COMPOSITION (Nominal) %

C	Mn	Cr	Ni	Mo	Al	Ti	V	
0.050	1.20	14.6	24.7	1.2	0.15	2.1	0.25	

PRE: 18 (PRE = Cr + 3.1 x Mo + 25 x N)

Comments:

THERMAL TREATMENT

Annealing temperature	980-1020	°C
	1800-1870	°F
Age hardening temperature	704-760	°C
	1299-1400	°F

PHYSICAL PROPERTIES

Condition: Annealed

Density	8.0	g / cm^3
Moduls of elasticity, E	196	GPa
Specific heat 0-100°C	460	J / kg°C

MAX. OPERATING TEMPERATURE

Operating temp. in air	700	°C
	1290	°F
Scaling temp. in air	1000	°C
	1830	°F

TYPICAL MECHANICAL PROPERTIES

Condition: Annealed

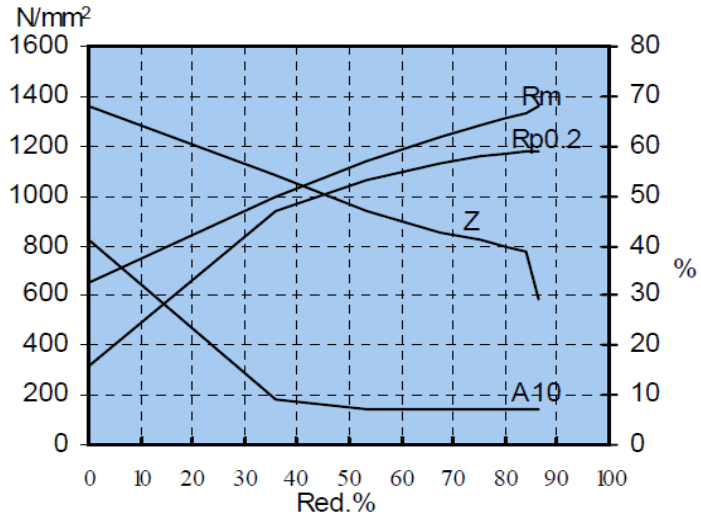
Proof strength	**Rp0.2**	min. 250	N / mm^2
Tensile strength	**Rm**	550-650	N / mm^2
Elongation	**A10**	min. 40	%
Stress rupture properties*		> 23h at 649 °C	483 MPa

* Annealed and Age hardened condition

THERMAL CONDUCTIVITY

100 °C	14.0	W / m°C
200 °C	16.0	W / m°C
400 °C	20.0	W / m°C
600 °C	24.0	W / m°C

DEFORMATION GRAPH



THERMAL EXPANSION

Thermal expansion per °C x 10-6 from 20°C to:

100 °C	17.0
200 °C	17.5
400 °C	18.0
600 °C	18.5
800 °C	19.0

RESISTIVITY

20 °C	90	µΩmm
100 °C	95	µΩmm
200 °C	100	µΩmm
400 °C	110	µΩmm
600 °C	115	µΩmm
800 °C	120	µΩmm