



# R250.19

**EN:** 1.4016  
**Type:** 430H



R250.19 is a nonhardenable ferritic stainless steel with a slightly higher carbon content (0.06%) than R250.11 (type 430). It is a grade suitable for general use in moderately corrosive- and oxidizing conditions. R250.19 is heat resistant in intermittent service up to approx. 870°C (1600°F) and up to approx. 820°C (1510°F) in continuous service. This grade is used for applications with a little higher demand of mechanical properties than R250.11, like spring wire and spoke wire.

## CHEMICAL COMPOSITION (Nominal) %

C	Si	Mn	Cr	Ni	Mo	N		
0.065	0.40	0.50	16.8	<0.30	<0.30	0.030		

PRE: 17 (PRE = Cr + 3.1 x Mo + 25 x N)

Comments:

## PHYSICAL PROPERTIES

Condition: Annealed

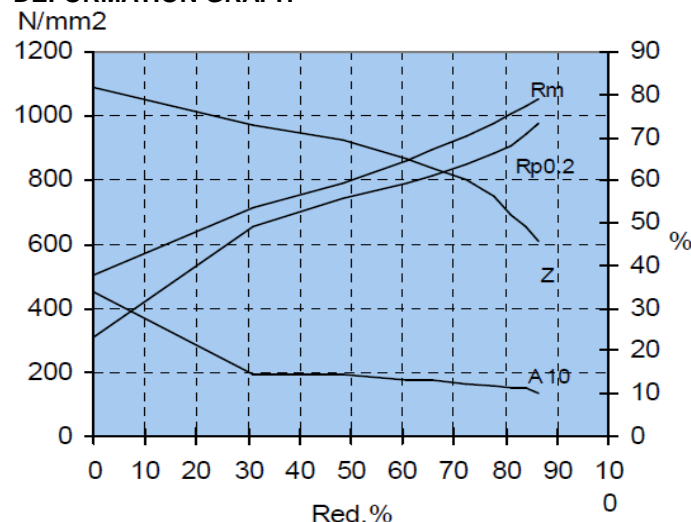
Density	7.7 g / cm <sup>3</sup>
Modulus of elasticity, E	220 000 GPa
Specific heat 0-100°C	500 J / kg°C

## TYPICAL MECHANICAL PROPERTIES

Condition: D-cooled

Proof strength	Rp0.2	min.300 N / mm <sup>2</sup>
Tensile strength	Rm	480-580 N / mm <sup>2</sup>
Elongation	A10	min.30 %

## DEFORMATION GRAPH



## THERMAL TREATMENT

Annealing temperature	750-800 °C
	1380-1470 °F

## MAX. OPERATING TEMPERATURE

Operating temp. in air	°C
	°F
Scaling temp. in air	870 °C
	1600 °F

## THERMAL CONDUCTIVITY

20 °C	22.0 W / mK
100 °C	22.5 W / mK
200 °C	23.5 W / mK
400 °C	24.5 W / mK

## THERMAL EXPANSION

Thermal expansion per °C x 10<sup>-6</sup> from 20°C to:

100 °C	11.0
200 °C	11.0
400 °C	11.5
600 °C	12.0
800 °C	12.5
1000 °C	13.0

## RESISTIVITY

20 °C	600 μΩmm
100 °C	700 μΩmm
200 °C	750 μΩmm
400 °C	950 μΩmm
600 °C	1100 μΩmm
800 °C	1200 μΩmm