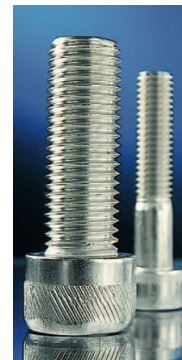


R350.19

EN: 1.4301
Type: 304
Werkst. Nr: 1.4301



R350.19 is an austenitic stainless steel grade. Its austenitic structure, good forming properties, good corrosion resistance and good weldability makes it very useful for general applications such as cold heading, bright forming, welding and spoke wire. This grade is non magnetic in annealed condition but will be a bit magnetic in a cold worked condition since a part of the austenite will be transformed into deformation martensite.

CHEMICAL COMPOSITION (Nominal) %

C	Si	Mn	Cr	Ni	Mo	N		
0.030	0.40	1.50	18.2	8.2	0.60*	0.060*		

PRE: 20 (PRE = Cr + 3.1 x Mo + 25 x N)

* = max

PHYSICAL PROPERTIES

Condition: Annealed

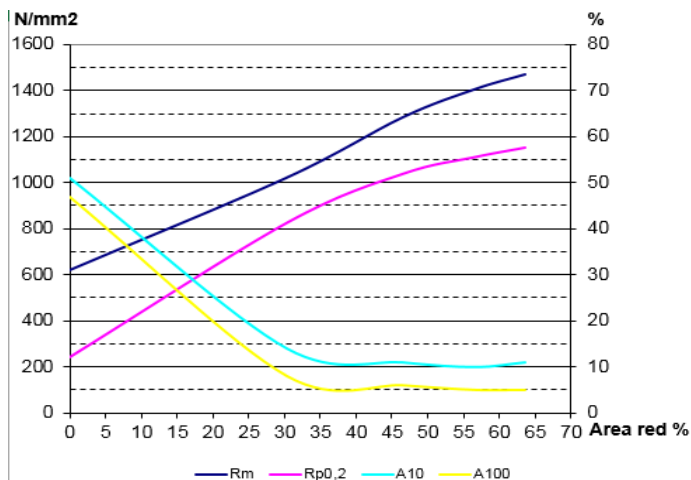
Density	7.9 g / cm ³
Modulus of elasticity, E	190 - 200 GPa
Specific heat 0-100°C	480 J / kg°C

TYPICAL MECHANICAL PROPERTIES

Condition: Annealed or DST-annealed (Direct Solution Treatm.)

Proof strength	Rp0.2	min 180 N / mm ²
Tensile strength	Rm	550 - 650 N / mm ²
Elongation	A10	min 45 %

DEFORMATION GRAPH



THERMAL TREATMENT

Annealing temperature	1000 - 1100 °C
	1832 - 2012 °F

MAX. OPERATING TEMPERATURE

Operating temp. in air	800 °C
	1472 °F
Scaling temp. in air	850 °C
	1562 °F

THERMAL CONDUCTIVITY

20 °C	15.0 W / mK
100 °C	15.5 W / mK
200 °C	17.5 W / mK
400 °C	20.0 W / mK

THERMAL EXPANSION

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

100 °C	16.0
200 °C	16.5
300 °C	17.0
400 °C	17.5
500 °C	18.0

RESISTIVITY

20 °C	700 μΩmm
100 °C	750 μΩmm
200 °C	800 μΩmm
300 °C	950 μΩmm