

R575.21

EN: 1.4567
Type: 304Cu
Werkst. Nr: 1.4567

R575.21 is an austenitic stainless steel grade. Its austenitic structure combined with added Copper makes the grade very usefull where there are high demands regarding corrosion resistance in combination with very good forming properties. The main usage is for cold heading but it is also used for other applications where there are demands for good corrosion resistance. 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. It is often used for cold heading, springs and bright forming applications.

CHEMICAL COMPOSITION (Nominal) %

C	Si	Mn	Cr	Ni	Mo	N	Cu	
0.015*	0.40	0.55	17.90	9.70	0.40*	0.025	3.5	

PRE: 19 (PRE = Cr + 3.1 x Mo + 25 x N)

* = max

PHYSICAL PROPERTIES

Condition: Annealed

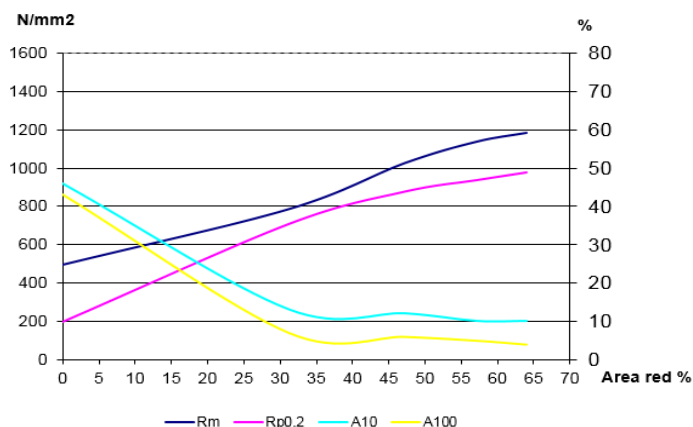
Density	7.9 g / cm ³
Modulus of elasticity, E	190 - 200 GPa
Specific heat 0-100°C	480 J / kg°C

TYPICAL MECHANICAL PROPERTIES

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

Proof strength	Rp0.2	min 170 N / mm ²
Tensile strength	Rm	450 - 550 N / mm ²
Elongation	A10	min 45 %

DEFORMATION GRAPH



THERMAL TREATMENT

Annealing temperature	1000 - 1100 °C 1832 - 2012 °F
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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	16.7
200 °C	17.2
300 °C	17.7
400 °C	18.1
500 °C	18.4

RESISTIVITY

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