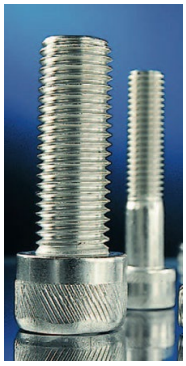
MARCEGAGLIA
FAGERSTA STAINLESS



EN 1.4307

Fagersta **R350.19 / R350.20 / R350.43 / R350.55**
Type: **304L**
Werkst. Nr: **1.4307**

EN 1.4307 is an austenitic stainless steel grade. Its austenitic structure, low carbon content and relatively high nickel content makes the grade very usefull where there are high demands regarding forming properties. Besides this, the grade has good corrosion resistance and good weldability and is therefore very useful for general applications. 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	PRE
R350.19	0.025	0.40	1.50	18.2	8.20	0.60	0.050*	20
R350.20	0.025*	0.45	1.20	18.5	9.75	0.60	0.030*	20
R350.43	0.020*	0.50	1.15	18.3	8.60	0.60	0.060*	20
R350.55	0.025	0,35	1,50	18,2	8,10	0.50	0,060	21

* = max (PRE = Cr + 3.1 x Mo + 25 x N)

THERMAL TREATMENT

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

PHYSICAL PROPERTIES

Condition: Annealed

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

MAX. OPERATING TEMPERATURE

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

TYPICAL MECHANICAL PROPERTIES

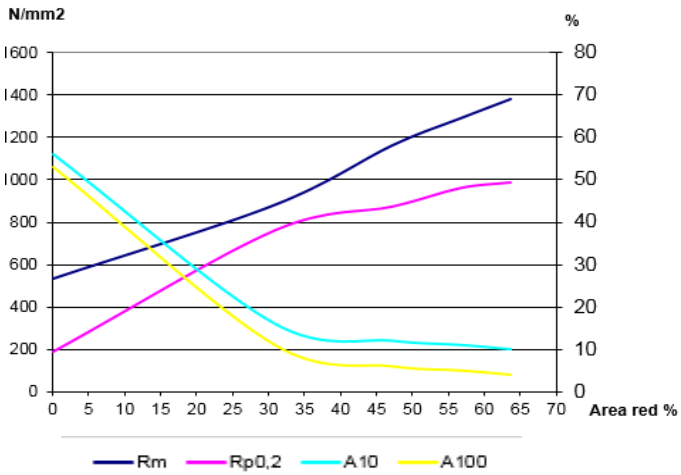
Condition: Annealed or DST-annealed (Direct Solution Treatm.)

Proof strength	**Rp0.2**	min 180 N / mm^2
Tensile strength	**Rm**	500 - 600 N / mm^2
Elongation	**A10**	min 40 %

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

DEFORMATION GRAPH



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