



R847.10

EN: 1.4547
254 SMO



R847.10 (254 SMO) is an austenitic stainless steel designed for maximum resistance to pitting and crevice corrosion and has very good resistance to various types of stress corrosion. This steel is specially suited for high chloride environments such as brackish water, seawater and high chloride resistance streams. Typical applications are wire for parts for seawater handling equipments, chemical and food processing equipments and oil and gas production equipments.

CHEMICAL COMPOSITION (Nominal) %

C	Si	Mn	Cr	Ni	Mo	Cu	N
<0.018	0.35	0.45	19.9	17.9	6.1	0.7	0.20

PRE: 44 (PRE = Cr + 3.1 x Mo + 25 x N)

Comments:

PHYSICAL PROPERTIES

Condition: Annealed

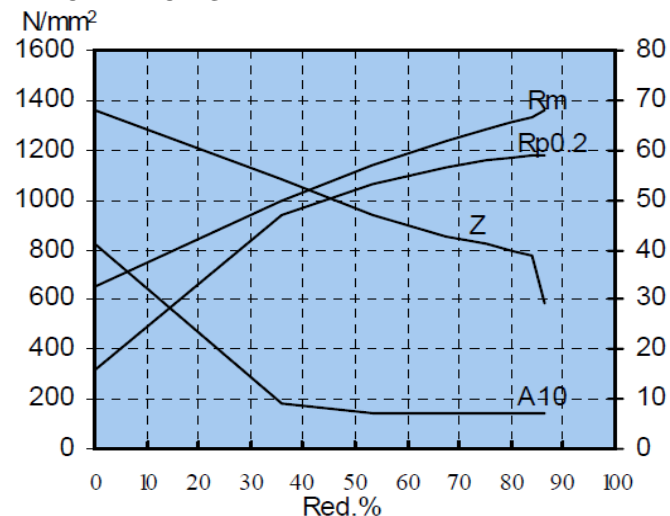
Density	8.0 g / cm ³
Modulus of elasticity, E	200 000 GPa
Specific heat 0-100°C	520 J / kg°C

TYPICAL MECHANICAL PROPERTIES

Condition: Annealed

Proof strength	Rp0.2	min. 250 N / mm ²
Tensile strength	Rm	600-700 N / mm ²
Elongation	A10	min. 55 %

DEFORMATION GRAPH



THERMAL TREATMENT

Annealing temperature	1150-1200 °C
	2100-2190 °F

MAX. OPERATING TEMPERATURE

Operating temp. in air	500 °C
	930 °F
Scaling temp. in air	1000 °C
	1830 °F

THERMAL CONDUCTIVITY

20 °C	13.5 W / mK
100 °C	14.5 W / mK
200 °C	15.5 W / mK
400 °C	18.5 W / mK
600 °C	21.5 W / mK
800 °C	24.5 W / mK

THERMAL EXPANSION

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

100 °C	16.5
200 °C	17.0
400 °C	18.0
600 °C	18.5
800 °C	19.0
1000 °C	19.5

RESISTIVITY

20 °C	850 μΩmm
100 °C	900 μΩmm
200 °C	950 μΩmm
400 °C	1100 μΩmm
600 °C	1200 μΩmm
800 °C	1200 μΩmm