



R240.10

EN: 1.4113
Type: 434

R240.10 is a nonhardenable ferritic stainless steel alloyed with approx. 1.0% Mo, designed especially for the automotive trim market to resist atmospheric corrosion in winter road conditions and dust-laying compounds. R240.10 has corrosion resistance similar to that of type 304 steel in many environments and is heat resistant up to approx. 870°C (1600°F) for intermittent service and up to approx. 820°C (1510°F) for continuous service. The addition of Mo improves the corrosion resistance to pitting corrosion. This results in R240.10 having less sensitivity than grade R250.11 (Type 430). Typical applications today are steel wool used in automotive exhaust systems like catalytic converters and muffler packing, filter products and furnace parts.

CHEMICAL COMPOSITION (Nominal) %

C	Si	Mn	Cr	Ni	Mo	N		
0.050	0.40	0.45	16.4	<0.50	1.05	<0.060		

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

Comments:

PHYSICAL PROPERTIES

Condition: Annealed

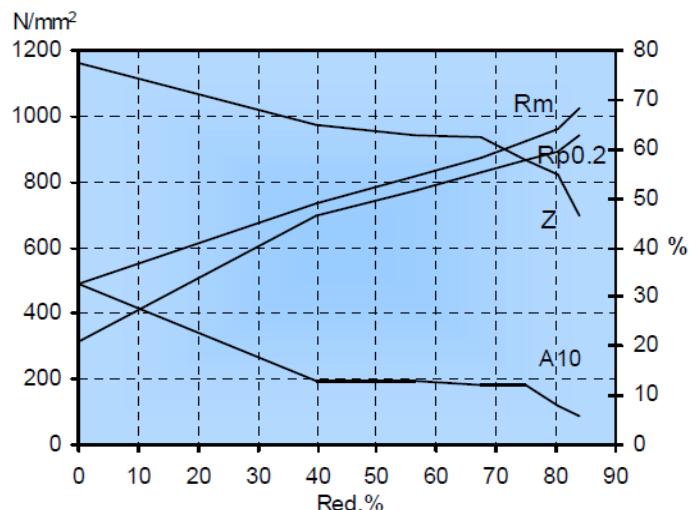
Density	7.7 g / cm ³
Modulus of elasticity, E	220 000 GPa
Specific heat 0-100°C	460 J / kg°C

TYPICAL MECHANICAL PROPERTIES

Condition: Annealed

Proof strength	Rp0.2	min.250 N / mm ²
Tensile strength	Rm	450-520 N / mm ²
Elongation	A10	min.25 %

DEFORMATION GRAPH



THERMAL TREATMENT

Annealing temperature	750-800 °C 1380-1470 °F
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MAX. OPERATING TEMPERATURE

Oxidizing atm. Intermitt./cont.	870 / 820 °C 1600 / 1510 °F
Scaling temp. in air	°C °F

THERMAL CONDUCTIVITY

100 °C	23.9 W / mK
500 °C	26.0 W / mK

THERMAL EXPANSION

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

100 °C	10.0
200 °C	10.5
300 °C	10.5
400 °C	10.5
500 °C	11.0
650 °C	11.9

RESISTIVITY

20 °C	720 μΩmm
100 °C	780 μΩmm
200 °C	860 μΩmm
400 °C	1000 μΩmm
600 °C	1110 μΩmm
800 °C	1210 μΩmm