



R526.18

EN: 19 9 7 Mn
AWS ER 307Si

R526.18 is a grade used as a welding wire for joining and surfacing applications on heat resistant Cr-steel and austenitic steels and for joining unalloyed/low-alloyed or Cr-steel to austenitic steel. This grade renders weld metal with high mechanical strength and excellent crack resistance even when welding steel with poor weld ability. Can also be used as a buffer layer prior to hard surfacing.

CHEMICAL COMPOSITION (Nominal) %

C	Si	Mn	Cr	Ni	Mo	N		
0.070	0.90	6.90	19.1	8.8	<0.30	0.060		

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

Comments:

THERMAL TREATMENT

Annealing temperature	1100 °C
	2000 °F

PHYSICAL PROPERTIES

Condition: Annealed

Density	7.9 g / cm ³
Modulus of elasticity, E	GPa
Specific heat 0-100°C	500 J / kg°C

MAX. OPERATING TEMPERATURE

Operating temp. in air	°C
	°F
Scaling temp. in air	850 °C
	1560 °F

TYPICAL MECHANICAL PROPERTIES

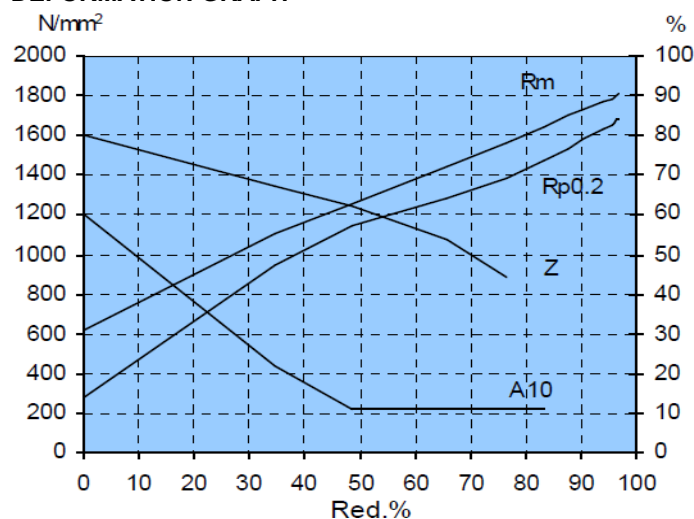
Condition: Annealed

Proof strength	Rp0.2	min. 180 N / mm ²
Tensile strength	Rm	500-620 N / mm ²
Elongation	A10	min. 45 %

THERMAL CONDUCTIVITY

20 °C	15.0 W / mK

DEFORMATION GRAPH



THERMAL EXPANSION

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

100 °C	14.6
500 °C	18.3
800 °C	19.3

RESISTIVITY

20 °C	750 μΩmm