

R476.25

AWS ER317L



R476.25 (ER317L) is an austenitic stainless steel alloyed with molybdenum for improved corrosion resistance. The grade is similar to Type 316 but with a slightly higher molybdenum and nickel content. Common applications for this grade includes welding consumables for chemical industry and other demanding industries.

CHEMICAL COMPOSITION (Nominal) %

C	Si	Mn	Cr	Ni	Mo	N
0.010	0.45	1.30	18.8	13.6	3.5	0.05

PRE: 31 (PRE = Cr + 3.1 x Mo + 25 x N)

PHYSICAL PROPERTIES

Condition: Annealed

Density	7.9 g / cm ³
Modulus of elasticity, E	200 GPa
Specific heat 0-100°C	500 J / kg°C

TYPICAL MECHANICAL PROPERTIES

Condition: Annealed

Proof strength	Rp0.2	240-270 N / mm ²
Tensile strength	Rm	540-590 N / mm ²
Elongation	A10	50 %

THERMAL TREATMENT

Annealing temperature	1040-1100 °C
	1900-2010 °F

MAX. OPERATING TEMPERATURE

Operating temp. in air	870 °C
	1598 °F
Scaling temp. in air	850 °C
	1562 °F

THERMAL EXPANSION

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

100 °C	16.5
200 °C	17.0
400 °C	17.5