Inweld 316L

AWS A5.9 ER316L

Chemical Composition of Inweld 316L

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu	Other
Balance	0.03	18.0-20.0	11.0-14.0	2.0-3.0	1.0-2.5	0.30-0.65	0.03	0.03	---	0.75	---

Single values are maximum unless otherwise specified.

Description and Applications

ER316L is primarily used for welding low carbon molybdenum-bearing austenitic alloys. This filler metal has the same analysis as ER316, except that the carbon content is limited to a maximum of 0.03% in order to reduce the possibility of formation of inter-granular carbide precipitation. This low carbon alloy is not as strong at elevated temperatures as ER 316H.

Typical Weld Metal Properties

	AWS Spec
Tensile Strength:	88,000 psi
Yield Strength:	58,000 psi
Elongation:	34%

Recommended Parameters

GMAW (DCEP – Electrode+) short circuit transfer: 98% Argon 2% Oxygen; Spray transfer: Trimix 90% Helium, 7.5% Argon and 2.5% Carbon Dioxide.

Wire Diameter	Voltage	Amperage
0.035”	16-26	70-160
0.035” (Spray)	26-31	150-230
0.045” (Spray)	28-32	180-280

GTAW

Wire Diameter	Voltage	Amperage
1/16”	14-18	90-130
3/32”	15-20	120-175
1/8”	15-20	150-220