Inweld 309L

AWS A5.9 ER309L

Chemical Composition of Inweld 309L

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
Balance	0.03	23.0-25.0	12.0-14.0	0.75	1.0-2.5	0.30-0.65	0.03	0.03	---	0.75

Single values are maximum unless otherwise specified.

Description and Applications

Inweld 309L is an austenitic stainless steel used for welding 309, 309L as well as other 300 series of stainless steels. Excellent for joining stainless steel to mild or carbon steels, buttered passes on steel overlay work and for welding AISI 304 clad stainless. The lower carbon content (L) produces a weld deposit that will offer good resistance against inter-granular corrosion caused by carbide precipitation, that might otherwise occur if using straight 309 grade.

Typical Weld Metal Properties

	AWS Spec
Tensile Strength:	85,000 psi
Yield Strength:	55,000 psi
Elongation:	40%

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	Argon (CFH)
0.023”	14-19	30-85	20
0.030”	15-20	45-125	20
0.035”	16-22	60-150	20
0.045”	17-22	90-210	25
			25

GTAW (DCEN – Electrode-)

Material	2% Thoriated	Filler Wire Size	Amperage
1/16”	1/16”	1/16”	80-120
3/32”	1/16”	1/16”	100-130
1/8”	3/32”	1/16”	120-150
3/16”	3/32”	3/32”	150-250
¼”	1/8”	1/8”	200-350

Pennsylvania
3962 Portland Street
Coplay, PA 18037

Texas
9300 Lawndale St.
Houston, TX 77012