Inweld 309LSi

AWS A5.9 ER309LSi

Chemical Composition of Inweld 309LSi

C	Zn	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
0.03	0.10	23.0-25.0	12.0-14.0	0.75	1.0-2.5	0.65-1.00	0.03	0.03	---	0.75

Single values are maximum unless otherwise specified.

Description and Applications

This classification is the sames as 309L, except for the higher silicon content. This improves the usability of the filler metal in the gas metal arc welding process. If the dilution by the base metal produces a low ferrite or fully austenitic weld, the crack sensitivity of the weld is somewhat higher than that of a lower silicon content weld metal. This wire is designed for joining stainless steel to mild or low alloy steels.

Typical Weld Metal Properties

	AWS Spec
Tensile Strength:	87,200
Yield Strength:	58,000
Elongation:	30%

Recommended Parameters

GGMAW (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	Wire Feed IPM
0.023”	14-19	30-85	
0.030”	15-20	45-125	150-430
0.035”	16-22	60-150	120-400
0.045”	17-22	90-210	100-240
0.030” (Spray)	24-28	160-220	440-650
0.035” (Spray)	23-29	170-295	430-500
0.045” (Spray)	24-30	195-360	220-400
1/16” (Spray)	25-31	210-380	110-210

GTAW (DCEN) 100% Argon with EWTh-2 Truncated Conical Tip

Wire Diameter	Tungsten	Voltage	Amperage	Argon (cfh)
1/16”	1/16”	12	80-150	20
3/32”	3/32”	12	150-250	20
1/8”	1/8”	12	200-375	25

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