

INCO-WELD® 309LSi is a modified version of 309L used in the welding of dissimilar materials. The elevated silicon content provides increased arc stability and weld puddle fluidity giving improved bead appearance, better weldability and operator appeal.

*Typical Chemical Analysis (%)

Element	%	AWS Requirement
Carbon (C)	0.02	0.03 max
Chromium (Cr)	24.0	23.0-25.0
Nickel (Ni)	13.0	12.0-14.0
Molybdenum (Mo)	0.2	0.75 max
Manganese (Mn)	1.75	1.0 to 2.5
Silicon (Si)	0.85	0.65-1.00
Phosphorus (P)	0.002	0.03 max
Sulphur (S)	0.001	0.03 max
Copper (Cu)	0.1	0.75 max

*Typical Mechanical Properties

Tensile Strength	87,000 psi
Yield Strength	56,000 psi
Elongation	36%
Charpy V-Notch (RT)	92 ft.lb

*Typical GMAW welding Parameters

	Wire Diameter	Amperage	Voltage	Shielding
Short Circuit	.035"	80-160	14-22	90% He + 7½% Ar + 2½ O2
	.045"	110-220	15-23	90% He + 7½% Ar + 2½ O2
	.062"	130-250	16-23	90% He + 7½% Ar + 2½ O2
Spray Transfer	.035"	175-250	23-26	Ar + 2% O2
	.045"	225-325	24-29	Ar + 2% O2
	.062"	300-425	26-30	Ar + 2% O2

Approvals

AWS A5.9 ER309LSi
ASME SFA 5.9
Canadian Welding Bureau

Available Sizes and Packaging

GTAW		GMAW		SAW	
Diameter	Packaging	Diameter	Packaging	Diameter	Packaging
1/16	10 lb. Tubes in 1 m Lengths	.030	30 lb. Spools/ Wire Baskets	3/32	60 lb. Coils
3/32		.035		1/8	
1/8		.045		5/32	
5/32		1/16			

*All information listed is provided as typical values and may differ from actual results due to variations in weld procedures. IAI disclaims any liability resulting from reliance on any of the above values.

Controlled Products Group

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