

INCO-WELD® 316LSi is a modified version of 316L used for joining 316 type plate and for weld overlaying of carbon steel. It provides good chloride pitting corrosion resistance. The elevated silicon content provides increased arc stability and weld puddle fluidity appearance, better weldability and operator appeal.

*Typical Chemical Analysis (%)

Element	%	AWS Requirement
Carbon (C)	.02	0.08 max
Chromium (Cr)	19.0	18.0-20.0
Nickel (Ni)	12.5	11.0-14.0
Molybdenum (Mo)	2.5	2.0-3.0
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	57,000 psi
Elongation	38%
Charpy V-Notch (RT)	95 ft.lb
Charpy V-Notch (-320 deg F)	36 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 ER316LSi
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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