Select 316LSi

Stainless Steel / Gas Shielded / Solid

PRODUCT DATA SHEET

FEATURES

- Increased silicon (Si) content compared to grades of similar alloy composition improves bead wetting and arc stability.
- Low carbon (C), < 0.03 wt%, minimizes carbide precipitation (sensitization) which makes the weld metal more resistant to intergranular corrosion.
- Unique manufacturing techniques provide enhanced arc stability and stable feeding.
- Applications for this alloy type include welding in the pulp and paper industry, chemical and textile processing equipment, furnace parts and in parts exposed to marine environments.
- Alloy types for welding include 316 stainless and similar alloys, such as A743 and A744 as well as CF-3M and CF-8M.

CONFORMANCES

AWS A5.9	ER316LSi
	ER316Si
ASME SFA 5.9	ER316LSi

DIAMETERS [in (mm)]

0.035 (0.9), 0.040 (1.0), 0.045 (1.2), 0.052 (1.3), 1/16 (1.6)

POSITIONS

SHIELDING GAS

Ar + 0.5-3% CO2, Ar + 0.5-3% O2
Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WIRE CHEMISTRY [WT%]

Shielding Gas	C	Cr	Cu	Mn	Mo	Ni	P	S	Si
N/A	0.02	18.40	0.17	1.75	2.53	11.80	0.023	0.013	0.85

Ferrite	Result
WRC 1992	8

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp
98%Ar / 2%O2	85 (586)	62 (428)	35	As-Welded	-

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RECOMMENDED WELDING PARAMETERS **

Diameter in (mm)	Shielding Gas	Position	WFS* in/min (m/min)	Amps	Volts	CTWD* in (mm)
0.035 (0.9 mm)	98% Ar/2% O2	Flat & Horizontal	450 (11.4)	170	21	1/2 (13)
		Flat & Horizontal	515 (13.1)	185	23	1/2 (13)
		Flat & Horizontal	560 (14.2)	200	24	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	655 (16.6)	205	26	1/2 - 5/8 (13 - 16)
0.040 (1.0 mm)	98% Ar/2% O2	Flat & Horizontal	390 (9.9)	195	21	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	445 (11.3)	210	23	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	490 (12.4)	225	24	5/8 (16)
		Flat & Horizontal	575 (14.6)	240	26	5/8 (16)
0.045 (1.2 mm)	98% Ar/2% O2	Flat & Horizontal	325 (8.3)	220	21	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	375 (9.5)	235	23	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	420 (10.7)	250	24	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	500 (12.7)	270	26	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)	98% Ar/2% O2	Flat & Horizontal	280 (7.1)	240	21	5/8 (16)
		Flat & Horizontal	335 (8.5)	270	23	5/8 (16)
		Flat & Horizontal	375 (9.5)	295	24	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	440 (11.2)	310	26	5/8 - 3/4 (16 - 19)
1/16 (1.6 mm)	98% Ar/2% O2	Flat & Horizontal	225 (5.7)	265	21	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	300 (7.6)	305	23	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	330 (8.4)	335	24	3/4 - 1 (19 - 25)
		Flat & Horizontal	375 (9.5)	350	26	3/4 - 1 (19 - 25)

** WFS = Wire Feed Speed, CTWD = Contact Tip To Work Distance*
***The parameters listed are recommended starting points of operation and the ranges for amperage, wfs, and voltage could be extended based on fitness for application. For products with "all-position" capability, as determined and listed in classification, the position recommendation can be determined based on operator skill and material thickness and isn't limited to the listing.*

APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
CWB CSA W48-23 / AWS A5.9M	ER316LSi	N/A	0.035 (0.9) - 1/16 (1.6)

PACKAGING [lbs [kgs]]

33 (15) Spools, 60 (27.2) Coils, 500 (226.8) Round Drum, 800 (362.9) Hex Drum, 900 (408.2) Hex Drum

**Some packaging options may not be available depending on diameter and product. Special package options may be available upon request.*

STORAGE AND HANDLING

All products should be stored in original packaging, in dry conditions and handled with care. For more information refer to our website.

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