

SelectAlloy 316LSi-C

Stainless Steel / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

FEATURES

- The addition of molybdenum (Mo) improves resistance to pitting and crevice corrosion compared to type 308 stainless steel.
- Increased silicon (Si) content compared to standard grades of the same 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.
- Metal cored benefits include the ability to successfully bridge gaps when part fit up is not as designed, higher travel speeds with subsequent lower heat inputs at equal amperages, and ability to join thin materials.
- Applications 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 A5.22

EC316LSi

EC316Si

ASME SFA 5.22

EC316LSi

EC316Si

DIAMETERS [in (mm)]

0.035 (0.9), 0.045 (1.2), 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 WELD DEPOSIT CHEMISTRY (WT%)

Shielding Gas	C	Cr	Cu	Mn	Mo	Ni	P	S	Si
98%Ar / 2%O ₂	0.03	18.50	0.18	1.40	2.40	12.30	0.020	0.004	0.77
Ferrite	Result								
WRC 1992	5 FN								

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp
98%Ar / 2%O ₂	84 (579)	64 (441)	36	As-Welded	-



Notice: Be sure to follow all your employers safety practices, policies and procedures when using this product. Refer to CSA W117.2 and ANSI Z49.1 Safety in Welding, Cutting and Allied Processes for further information and the manufactures SDS sheet. The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.

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% O ₂	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)
0.045 (1.2 mm)	98% Ar/2% O ₂	Flat & Horizontal	325 (8.3)	220	22	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)
1/16 (1.6 mm)	98% Ar/2% O ₂	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	EC316LSi	I1 (Argon)	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.



Notice: Be sure to follow all your employers safety practices, policies and procedures when using this product. Refer to CSA W117.2 and ANSI Z49.1 Safety in Welding, Cutting and Allied Processes for further information and the manufactures SDS sheet. The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.