BLUE MAX® MIG 316LSI

Stainless ▪ AWS ER316Si, ER316LSi

KEY FEATURES

- High silicon level for increased puddle fluidity and toe wetting
- Proprietary surface lubricant for steady feeding and arc stability
- Molybdenum grade for increased corrosion resistance
- Q2 Lot® - Certificate showing actual wirecomposition and calculated ferrite number (FN) available online
- Controlled ferrite content for maximum corrosion resistance
- Similar to 316L, with higher silicon content for optimum ease and speed in MIG welding and smooth bead appearance

CONFORMANCES

AWS A5.9:	ER316Si, ER316LSi
ASME SFA-A5.9:	ER316Si, ER316LSi
ABS:	ER316Si, ER316LSi
CWB/CSA W48-06:	ER316LSi
EN ISO 14343-B:	SS316LSi
ISO 14343:2009:	(19 12 3 L Si)

TYPICAL APPLICATIONS

- Molybdenum bearing austenitic stainless steels
- Type 316 and 316L
- Exceptionally performs at high wire feed speeds

WELDING POSITIONS

All

SHIELDING GAS

Short Circuiting Transfer:
90% He / 7.5% Argon / 2.5% CO_2

Axial Spray Transfer:
98% Argon / Balance Oxygen

DIAMETERS / PACKAGING

Diameter in (mm)	25 lb (11.3 kg) Plastic Spool	33 lb (15 kg) Plastic Spool	250 lb (113 kg) Accu-Trak® Drum	500 lb (227 kg) Accu-Trak® Drum	500 lb (227 kg) Speed Feed® Reel
0.030 (0.8)	ED023963				
0.035 (0.9)	ED019298[6]	ED037302		ED029772	
0.045 (1.1)	ED019299[6]	ED037303	ED035112	ED029773	
1/16 (1.6)	ED019300				ED035115

MECHANICAL PROPERTIES[1] – *As Required per AWS A5.9*

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Ferrite Number
Typical Results[3] - As-Welded	405 (59)	560 (81)	40	7

WIRE COMPOSITION[1] – *As Required per AWS A5.9*

	%C[4]	%Cr	%Ni	%Mo	%Mn
Requirements - AWS ER316LSi	0.03 max	18.0-20.0	11.0-14.0	2.0-3.0	1.0-2.5
Typical Results[3]	0.02	18.9	11.8	2.2	2.1
	%Si	**%P**	**%S**	**%N[5]**	**%Cu**
Requirements - AWS ER316LSi	0.65-1.00	0.03 max	0.03 max	Not Specified	0.75 max
Typical Results[3]	0.81	0.02	0.01	0.05	0.23

[1]Typical all weld metal. [2]Measured with 0.2% offset. [3]See test results disclaimer [4] AWS Requirements for ER308Si is 0.08% max carbon. [5]Included in 0.50% max. for other elements not specified.
[6]This 25 lb (11.3 kg) package will be discontinued as stock is depleted and replaced with the 33 lb (15 kg) package shown. [7]To estimate ESO, subtract 1/8 in (3 mm) from CTWD.

TYPICAL OPERATING PROCEDURES

Diameter, Polarity Shielding Gas	CTWD[6] mm (in)	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Deposition Rate kg/hr (lb/hr)
Short Circuit Transfer					
	13 (1/2)	3.0 (120)	19-20	55	0.9 (2.0)
	13 (1/2)	4.6 (180)	19-20	85	1.4 (3.0)
0.035 in (0.9 mm), DC+	13 (1/2)	5.8 (230)	20-21	105	1.8 (3.9)
90% He / 7-1/2% Ar / 2-1/2% CO_2	13 (1/2)	7.6 (300)	20-21	125	2.3 (5.0)
	13 (1/2)	8.9 (350)	21-22	140	2.7 (5.9)
	13 (1/2)	10.2 (400)	22-23	160	3.1 (6.7)
	13 (1/2)	2.5 (100)	19-20	100	1.1 (2.8)
	13 (1/2)	3.2 (125)	19-20	120	1.5 (3.5)
0.045 in (1.1 mm), DC+	13 (1/2)	3.8 (150)	21	135	1.7 (4.2)
90% He / 7-1/2% Ar / 2-1/2% CO_2	13 (1/2)	4.4 (175)	21	140	2.0 (4.8)
	13 (1/2)	5.6 (220)	22	170	2.6 (6.1)
	13 (1/2)	6.4 (250)	22-23	175	2.9 (6.9)
	13 (1/2)	7.0 (275)	22-23	185	3.2 (7.6)
Axial Spray Transfer					
	13 (1/2)	10.2 (400)	22	180	3.1 (6.7)
0.035 in (0.9 mm), DC+	13 (1/2)	10.8 (425)	23	190	3.3 (7.1)
98% Ar/2% O_2	13 (1/2)	11.4 (450)	23	200	3.5 (7.5)
	13 (1/2)	12.1 (475)	23	210	3.7 (8.0)
	13 (1/2)	6.1 (240)	23	195	2.8 (6.6)
0.045 in (1.1 mm), DC+	13 (1/2)	6.6 (260)	24	230	3.0 (7.2)
98% Ar/2% O_2	13 (1/2)	7.6 (300)	24	240	3.5 (8.3)
	13 (1/2)	8.3 (325)	25	250	3.8 (9.0)
	13 (1/2)	9.1 (360)	25	260	4.2 (10.0)
	19 (3/4)	4.4 (175)	25	260	4.3 (9.2)
1/16 in (1.6 mm), DC+	19 (3/4)	5.1 (200)	26	310	4.9 (10.5)
98% Ar/2% O_2	19 (3/4)	6.4 (250)	26	330	6.2 (13.1)
	19 (3/4)	7.0 (275)	27	360	6.8 (14.4)
	19 (3/4)	7.6 (300)	28	390	7.4 (15.8)

[1]Typical all weld metal. [2]Measured with 0.2% offset. [3]See test results disclaimer [4] AWS Requirements for ER308Si is 0.08% max carbon. [5]Included in 0.50% max. for other elements not specified.
[7]To estimate ESO, subtract 1/8 in (3 mm) from CTWD.

Safety Data Sheets (SDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

FUMES AND GASES can be hazardous to your health.

- Fumes from the normal use of this product contain significant quantities of potentially hazardous compounds. See consumable product label/insert.
- Keep your head out of the fumes.
- Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area.
- An approved respirator should be used unless exposure assessments are below applicable exposure limits.

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

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