SUPERARC® LA-75™

Low Alloy, Copper Coated ▪ AWS ER80S-Ni1 & ENi1K

BUY AMERICA

KEY FEATURES

- Capable of producing weld deposits with 550 MPa (80 ksi) tensile strength
- High toughness at low temperatures with a nominal 1% Ni or less
- MicroGuard® Ultra provides superior feeding and arc stability
- Supports short-circuiting, globular, axial spray and pulsed spray transfer

CONFORMANCES

AWS A5.28/A5.28M:	ER80S-Ni1
ASME SFA-A5.28:	ER80S-Ni1
AWS A5.17/A5.17M:	ENi1K
ABS:	ER80S-Ni1
CWB/CSA W48-06:	ER55S-Ni1 (ER80S-Ni1)
EN ISO 14341-B:	G 55A 4 A SN2

WELDING POSITIONS

All

TYPICAL APPLICATIONS

- ASTM A588 weathering steel requiring good atmospheric corrosion resistance
- NACE applications

SHIELDING GAS

90-95% Argon / Balance CO_2
95-98% Argon / Balance O_2
Flow Rate: 30 - 50 CFH

DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Steel Spool
0.035 (0.9) 0.045 (1.1)	ED031415, ED033949** ED031416, ED034432*

**Buy America Product. **Q2 Tested Product.*

MECHANICAL PROPERTIES[1] – *As Required per AWS A5.28/A5.28M*

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) @ -29°C (-20°F)	@ -45°C (-50°F)	@ -62°C (-80°F)
Requirements - AWS ER80S-Ni1 As-Welded with 98% Ar/2% O_2	470 (68) min	550 (80) min	24 min	Not Specified	27 (20) min	Not Specified
Typical Results[3] As-Welded with 90% Ar/10% CO_2 Stress Relieved 1 hr. @ 621°C (1150° F)	475 (69) 450 (65)	580 (84) 565 (82)	28 32	119 (88) - -	82 (60) 127 (93)	35 (26) 112 (82)
As-Welded with 98% Ar/2% O_2 Stress Relieved 1 hr. @ 621°C (1150° F)	490 (71) 420 (61)	580 (84) 540 (78)	30 31	- - - -	172 (127) 230 (170)	- - 165 (122)

[1]Typical all weld metal. [2]Measured with 0.2% offset. [3]See test results disclaimer

WIRE COMPOSITION – *As Required per AWS A5.28/A5.28M*

	%C	%Mn	%Si	%Ni	%Cr
Requirements - AWS ER80S-Ni1	0.12 max	1.25 max	0.40-0.80	0.80-1.10	0.15 max
Typical Results[3]	0.07-0.08	0.94-1.04	0.54-0.58	0.88-0.98	≤ 0.04
	%Mo	**%S**	**%P**	**%V**	**%Cu (Total)**[4]
Requirements - AWS ER80S-Ni1	0.35 max	0.025 max	0.025 max	0.05 max	0.35 max
Typical Results[3]	≤ 0.02	0.007 - 0.010	0.005 - 0.010	< 0.01	0.16 - 0.21

TYPICAL OPERATING PROCEDURES

Diameter, Polarity Shielding Gas	CTWD[5] mm (in)	Wire Feed Speed m/min (in/min)	Voltage (volts)	Approx. Current (amps)	Melt-Off Rate kg/hr (lb/hr)
0.035 in (0.9 mm), DC+					
Short Circuit Transfer 90% Ar/ 10% CO_2	9-12 (3/8-1/2)	2.5 (100) 3.8 (150) 6.4 (250)	17 18 22	80 120 175	0.7 (1.6) 1.1 (2.4) 1.8 (4.0)
Spray Transfer 90% Ar/10% CO_2	12-19 (1/2-3/4)	9.5 (375) 12.7 (500) 15.2 (600)	23 29 30	195 230 275	2.7 (6.0) 3.6 (8.0) 4.4 (9.6)
0.045 in (1.1 mm), DC+					
Short Circuit Transfer 90% Ar/ 10% CO_2	12-19 (1/2-3/4)	3.2 (125) 3.8 (150) 5.1 (200)	19 20 21	145 165 200	1.5 (3.4) 1.8 (4.0) 2.4 (5.4)
Spray Transfer 90% Ar/10% CO_2	12-19 (1/2-3/4)	8.9 (350) 12.1 (475) 12.7 (500)	27 30 30	285 335 340	4.2 (9.2) 5.7 (12.5) 6.0 (13.2)

[1]Typical all weld metal. [2]Measured with 0.2% offset. [3]See test results disclaimer [4]Copper due to any coating on the electrode plus the copper content of the filler metal itself, shall not exceed the stated 0.50% max. [5]CTWD (Contact Tip to Work Distance). Subtract 1/4 in (6.4 mm) to calculate Electrical Stickout. NOTE: For 100% CO_2 procedures, add 1 to 2 volts for short circuit transfer and 2 to 3 volts for globular transfer.

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

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