

PIPELINER® 70S-6

Mild & Low Alloy Steel Pipe ■ AWS ER70S-6

KEY FEATURES

- An engineered alloy providing superior impact toughness at low temperatures
- Q2 Lot® - Certificates showing actual wire composition and actual mechanical properties available online
- Microguard® Ultra provides superior feeding and arc stability throughout all four quadrants of the pipe
- ProTech® packaging system

WELDING POSITIONS

All

CONFORMANCES

AWS A5.18/A5.18M:	ER70S-6
ASME SFA-A5.18:	ER70S-6
EN ISO 14341-B:	G 49A 3 C S6

TYPICAL APPLICATIONS

- Root pass welding
- Hot, fill and cap pass welding of up to X70 grade pipe

SHIELDING GAS

100% CO₂
75-95% Argon / Balance CO₂
Flow Rate: 30 - 50 CFH

DIAMETERS / PACKAGING

Diameter mm (in)	33lb (15kg) Plastic Spool (Vacuum Sealed Foil Bag)
1.0 (0.040)	ED036532
1.2 (0.047)	ED036535

MECHANICAL PROPERTIES⁽¹⁾ – As Required per AWS A5.18/A5.18M

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft·lbf)	
				@-29°C (-20°F)	@-50°C (-58°F)
Requirements - AWS ER70S-6 As-Welded with 100% CO ₂	400 (58) min	485 (70) min	22 min	27 (20) min	Not Specified
Typical Results ⁽³⁾ As-Welded with 100% CO ₂	470 (68)	580 (84)	28	90 (66)	-
Typical Results ⁽⁴⁾ As-Welded with 80% Ar/20% CO ₂	641 (93)	710 (103)	22	123 - 144 (91-106)	87 - 110 (64-81)

WIRE COMPOSITION – As Required per AWS A5.18/A5.18M

	%C	%Mn	%Si	%S	%P
Requirements - AWS ER70S-6	0.06-0.15	1.40-1.85	0.8-1.15	0.035 max	0.025 max
Typical Results ⁽³⁾	0.10	1.46	0.82	0.009	0.005
	%Cr	%Ni	%Mo	%V	%Cu (Total) ⁵
Requirements - AWS ER70S-6	0.15 max	0.015 max	0.15 max	0.03 max	0.50 max
Typical Results ⁽³⁾	0.03	0.01	0	<0.003	0.17

TYPICAL OPERATING PROCEDURES

Diameter, Polarity Shielding Gas	CTWD ⁽⁶⁾ mm (in)	Wire Feed Speed m/min (in/min)	Voltage (volts)	Approx. Current (amps)	Melt-Off Rate kg/hr (lb/hr)
1.0 mm (0.040 in), DC+ 75-95% Ar / Balance CO ₂	12-19 (1/2-3/4)	2.5-14.0 (100-550)	19-31	105-320	1.0-5.2 (2.1-11.5)
1.2 mm (0.047 in), DC+ 75-95% Ar / Balance CO ₂	12-19 (1/2-3/4)	3.2-12.7 (125-500)	19-31	145-360	1.7-6.5 (3.7-14.3)

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer. ⁽⁴⁾Results are as-welded in a simulated groove pipe joint in the flat position with X70 base plate, at 18kl/in heat input.

⁽⁵⁾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.

⁽⁶⁾CTWD (Contact Tip to Work Distance). Subtract 1/4 in. (6.4 mm) to calculate Electrical Stickout.

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

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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