

WELD 70S-6

ESAB WELD 70S-6 is a copper-coated AWS ER70S-6 solid wire, suited for general purpose, manual and semiautomatic applications in most industries. It is manufactured under ESAB's Quality Control programs and meets AWS standards.

Classifications:	AWS A5.18: ER70S-6
Approvals:	ABS 3YSA (C1), ABS 3YSA (M21), JIS YGW12, LR 3Y H15 (C1), LR 3Y H15 (M21)
Industry:	Ship/Barge Building, Civil Construction, Mobile Equipment, Industrial and General Fabrication, Automotive

Approvals are based on factory location. Please contact ESAB for more information.

Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
75% Ar - 25% CO₂			
As Welded	538 MPa (78 ksi)	607 MPa (88 ksi)	27 %
90% Ar - 10% CO₂			
As Welded	538 MPa (78 ksi)	620 MPa (90 ksi)	24 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
75% Ar - 25% CO₂		
As Welded	-40 °C (-40 °F)	122 J (90 ft-lb)
As Welded	-45 °C (-50 °F)	96 J (71 ft-lb)
As Welded As welded	-29 °C (-20 °F)	144 J (106 ft-lb)
90% Ar - 10% CO₂		
As Welded	-29 °C (-20 °F)	141 J (104 ft-lb)
As Welded	-40 °C (-40 °F)	110 J (81 ft-lb)
As Welded	-45 °C (-50 °F)	110 J (81 ft-lb)

Typical Wire Composition %									
C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
0.12	1.80	1.15	0.025	0.025	0.15	0.15	0.15	0.03	0.35

Deposition Data						
Diameter	Optimal Amps	Current	Voltage	Wire Feed Speed	Electrode Unit	
Short Arc Transfer						
0.9 mm (.035 in.)	130 A	90-160 A	15-19 V	457-762 cm/min (180-300 in./min)	206 m/kg (3670 in./lb)	
1.2 mm (.045 in.)	160 A	130-200 A	17-19 V	318-508 cm/min (125-200 in./min)	124 m/kg (2220 in./lb)	
Spray Transfer						
0.9 mm (.035 in.)	200 A	180-230 A	25-27 V	1016-1397 cm/min (400-550 in./min)	206 m/kg (3670 in./lb)	
1.2 mm (.045 in.)	300 A	260-340 A	25-30 V	762-1270 cm/min (300-500 in./min)	124 m/kg (2220 in./lb)	