



MAGMA
North America

MG 2



Mild Steel, Copper Coated Welding Wire - AWS A5.18/ASME SFA-A5.18: ER70S-6

Key Benefits

- Excellent welding properties and weld bead appearance
- Tolerant to mill scale and rusty surfaces due to high level of deoxidizers (Manganese and Silicon)
- Excellent mechanical properties at low temperatures: -51°C (-60°F)
- Suitable for short-circuiting, globular, spray and pulsed-spray welding modes

Welding Positions

All

Conformity and Approvals

AWS A5.18:	ER70S-6
ASME SFA-A5.18:	ER70S-6
CWB/CSA W-48-14:	ER49S-6
EN ISO 14341-A:	G 42 3 C1 G 3Si1
ABS:	3YSA
GL:	3YS
DNV:	3YS

Shielding Gas

100% CO₂
75% - 98% Argon/ Balance CO₂
Flow rate: 30-50 CFH

Typical Wire Composition as per AWS A5.18/A5.18M ER70S-6

Requirements - AWS ER70S-6 Typical Wire Composition	%C 0.06-0.15 0.08	%Mn 1.40-1.85 1.50	%Si 0.80-1.15 0.90	%S 0.035 max 0.014	%P 0.025 max 0.006
Requirements - AWS ER70S-6 Typical Wire Composition	%Cr 0.15 max 0.025	%Ni 0.15 max 0.047	%Mo 0.15 max 0.005	%V 0.03 max 0.007	%Cu 0.50 max 0.037

Mechanical Properties as per AWS A5.18/A5.18M ER70S-6

	Shielding Gas	Yield Strength MPa (ksi)	Tensile Strength MPa (ksi)	Elongation (%)	Impact Energy (J)
Requirements – AWS ER70S-6	100% CO ₂	400 (58) min	485 (70) min	22 min	27J at -29°C (20 lbf at -20°F) Not specified at -40°C (-40°F)
Typical Results (all weld metal) As Welded	100% CO ₂ 75% Ar / 25% CO ₂	460 (66) 430 (62)	530 (76) 530 (76)	29 24	71J at -29°C (52 lbf at -20°F) 57J at -51°C (42 lbf at -60°F)

Magma North America

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Ordering Information

Product Code	Product/AWS Specification	Dimension mm/inches	Single Pack Weight kg/lb	Box Weight kg/lb
MW70S6065	MG 2 (ER70S-6)	0.60 mm (0.023")	5.0 kg (11.0 lb)	5.0 kg (11.0 lb)
MW70S6085	MG 2 (ER70S-6)	0.80 mm (0.030")	5.0 kg (11.0 lb)	5.0 kg (11.0 lb)
MW70S6095	MG 2 (ER70S-6)	0.90 mm (0.035")	5.0 kg (11.0 lb)	5.0 kg (11.0 lb)
MW70S60815	MG 2 (ER70S-6)	0.80 mm (0.030")	15.0 kg (33.0 lb)	15.0 kg (33.0 lb)
COPPER COATED				
MW70S60902CC	MG 2 (ER70S-6)	0.90 mm (0.035")	20.0 kg (44.0 lb)	20.0 kg (44.0 lb)
MW70S61220CC	MG 2 (ER70S-6)	1.20 mm (0.045")	20.0 kg (44.0 lb)	20.0 kg (44.0 lb)
NON-COPPER COATED				
MW70S60902NC	MG 2 (ER70S-6)	0.90 mm (0.035")	20.0 kg (44.0 lb)	20.0 kg (44.0 lb)
MW70S61220NC	MG 2 (ER70S-6)	1.20 mm (0.045")	20.0 kg (44.0 lb)	20.0 kg (44.0 lb)