

# 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

### 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

### Welding Positions

All

### Shielding Gas

100% CO<sub>2</sub>  
 75%-98% Argon / Balance CO<sub>2</sub>  
 Flow rate: 30-50 CFH

### 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 (ft = lbf)
<b>Requirements - AWS ER70S-6</b>					
As Welded	100% CO <sub>2</sub>	400 (58) min	485 (70) min.	22 min.	27J at -29°C (20 lbf at -20°F) Not specified at -40°C (-40°F)
<b>Typical Results (all weld metal)</b>					
As Welded	100% CO <sub>2</sub>	460 (66)	530 (76)	29	71J at -29°C (52 lbf at -20°F)
As Welded	75% Ar / 25% CO <sub>2</sub>	430 (62)	530 (76)	24	57J at -51°C (42 lbf at -60°F)

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

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

## Ordering Information

Diameter mm (in)	Article Number	Weight kg (lb.)	Spool Type
0.6 (0.025)	2100200M70	1 (2.2)	D100 - RND <sup>1</sup>
0.6 (0.025)	2100200M21	5 (11)	D200 - RND <sup>1</sup>
0.6 (0.025)	2100200M15	12 (26.4)	K300MS - RND <sup>1</sup>
0.8 (0.030)	2100201M70	1 (2.2)	D100 - RND <sup>1</sup>
0.8 (0.030)	2100201M21	5 (11)	D200 - RND <sup>1</sup>
0.8 (0.030)	2100201M35	15 (33)	D300 - PLW <sup>2</sup>
0.8 (0.030)	2100201M15	15 (33)	K300MS - PLW <sup>2</sup>
0.9 (0.035)	2100202M15	15 (33)	K300MS - PLW <sup>2</sup>
0.9 (0.035)	2100202M57	250 (550)	Drum - RND <sup>1</sup>
1.0 (0.040)	2100203M70	1 (2.2)	D100 - RND <sup>1</sup>
1.0 (0.040)	2100203M21	5 (11)	D200 - RND <sup>1</sup>
1.0 (0.040)	2100203M35	15 (33)	D300 - PLW <sup>2</sup>
1.0 (0.040)	2100203M15	15 (33)	K300MS - PLW <sup>2</sup>
1.2 (0.045)	2100205M70	1 (2.2)	D100 - RND <sup>1</sup>
1.2 (0.045)	2100205M21	5 (11)	D200 - RND <sup>1</sup>
1.2 (0.045)	2100205M35	15 (33)	D300 - PLW <sup>2</sup>
1.2 (0.045)	2100205M15	15 (33)	K300MS - PLW <sup>2</sup>
1.2 (0.045)	2100205M57	250 (550)	Drum - RND <sup>1</sup>
1.6 (1/16")	2100208M35	15 (33)	D300 - PLW <sup>2</sup>
1.6 (1/16")	2100208M15	15 (33)	K300MS - PLW <sup>2</sup>

<sup>1</sup> RND = Random Wound Wire

<sup>2</sup> PLW = Precision Layer Wound

