



ADVANTAGE™ E70C-6M Metal-Cored Wire



ADVANTAGE™ E70C-6M metal-cored wire is formulated for use with argon/CO₂ blends and designed for flat and horizontal position welding of carbon steel. It is level wound and features excellent feedability, good penetration and wetting, a smooth arc and high deposition rates.

Features and Benefits

- High deposition
- Outstanding mechanical properties
- Excellent wetting characteristics
- Good impact values at low temperatures
- High resistance to porosity
- Good puddle fluidity
- Low hydrogen weld deposit
- Smooth arc
- Low spatter
- Excellent bead appearance
- Up to 3 pass welding without deslagging with clean material

Classification	Shielding gas
→ AWS A5.18/A5.18M:2005	→ STARGOLD™ C2 gas blend
→ E70-6M-H4	→ STARGOLD C5 gas blend
→ E492C-6M-H4	→ STARGOLD C10 gas blend
	→ STARGOLD C15 gas blend
	→ STARGOLD C20 gas blend
	→ STARGOLD C25 gas blend

Applications

Designed for flat and horizontal welding of 70,000 psi (490 Mpa) carbon steel applications including:

- Machinery
- Shipbuilding
- Offshore Construction
- Bridges
- Trailers
- General Fabrication

Welding Positions



Welding Conditions for Mechanical Property Test

Electrode	.052" (1.3 mm)
Wire feed speed (in/min)	180 IPM
Polarity	DC+
Current (A)	200 A
Shielding gas used	75% Ar + 25% CO ₂
Preheat temp. °F (°C)	70 (20)
Voltage (V)	25V
Interpass temp. °F (°C)	300 (150)

Typical Chemical Analysis
(As Welded)

Weld metal analysis	Typical 75% Argon/25% CO ₂	AWS A5.18
Carbon	0.04	0.12 Max
Silicon	0.60	0.90 Max
Manganese	1.41	1.75 Max
Phosphorous	0.015	0.03 Max
Sulfur	0.076	0.03 Max
Chromium	0.04	0.20 Max
Nickel	0.06	0.50 Max
Molybdenum	0.01	0.30 Max
Copper	0.05	0.50 Max
Vanadium	0.001	0.08 Max

Mechanical Properties
(As Welded)

Mechanical tests	Typical 75% Argon/25% CO ₂	AWS A5.18
Tensile Strength	82 ksi (565 Mpa)	70 ksi (480 Mpa)
Yield Strength	69 ksi (474 Mpa)	58 ksi (400 Mpa)
Elongation	28.3%	22% Min

Typical Charpy V-Notch
Impact Test Results
(As Welded)

CVN temperatures	Typical 75% Argon/25% CO ₂	AWS A5.18
Avg. at 0°F (-20°C)	42.8 ft-lbs (52 Joules)	20 ft-lbs (27 Joules Min)

Recommended Parameters
for Standard Diameters

Wire type	.045 in. (1.2 mm)	.052 in. (1.4 mm)	.062 in. (1.6 mm)
Flat (PA/1G)	250/350A, 28/32V	250/350A, 28/32V	275/450A, 29/34V
Horizontal (PC2G)	250/350A, 28/32V	250/350A, 28/32V	275/450A, 29/34V

Linde has a detailed parameter chart available for this product.

Commonly Ordered
Part Numbers

Wire type	Diameter (in.)	Packaging	Part number
E70C-6M	0.045	44 lb Spool	ADG70C6M04544
E70C-6M	0.052	44 lb Spool	ADG70C6M05244
E70C-6M	0.062	44 lb Spool	ADG70C6M11644
E70C-6M	0.045	500 lb Drum	ADG70C6M045500
E70C-6M	0.052	500 lb Drum	ADG70C6M052500
E70C-6M	0.062	700 lb Drum	ADG70C6M116700

- Storage** → Store in a dry, enclosed environment
 → Store in its original, intact packaging

ADVANTAGE™ metal-cored welding wire is well protected against moisture – is paper lined and wrapped in plastic, with silica gel.



Step 1
Opening the rugged, glued box



Step 2
Opening the outer plastic bag



Step 3
Opening the inner plastic wrap

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