

OK Aristorod 12.50

OK Aristorod 12.50 is a bare Mn-Si-alloyed G3Si1/ER70S-6 solid wire for the GMAW of non-alloyed steels, as used in general construction, automotive components, pressure vessel fabrication and shipbuilding. OK Aristorod 12.50 is treated with ESAB's unique Advanced Surface Characteristics (ASC) technology, taking MIG/MAG welding operations to new levels of performance and all-round efficiency, especially in robotic and mechanised welding. Characteristic features include excellent start properties; trouble-free feeding at high wire speeds and lengthy feed distances; a very stable arc at high welding currents; extremely low levels of spatter; low fume emission; reduced contact tip wear and improved protection against corrosion of the wire.

Classifications:	AWS A5.18:ER70S-6
Approvals:	GL 3YS, BV SA3YM, DNV III YMS, ABS 3SA,3YSA, CWB CSA W48 ER49S-6, DB 42.039.29, LR 3S 3YS, VdTUV 10052
Industry or Segmentation:	Automotive, Industrial and General Fabrication, Mobile Equipment, Ship/Barge Building

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

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Reduction in Area	Elongation
100% CO₂				
As Welded	448 MPa (65 ksi)	538 MPa (78 ksi)	70 %	25 %
75% Ar - 25% CO₂				
As Welded	455 MPa (66 ksi)	565 MPa (82 ksi)	61 %	28 %
90% Ar - 10% CO₂				
As Welded	455 MPa (66 ksi)	565 MPa (82 ksi)	56 %	27 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
As Welded	-20 °C (-4 °F)	90 J (70 ft-lb)
As Welded	-30 °C (-22 °F)	70 J (51 ft-lb)
As Welded	-40 °C (-40 °F)	60 J (44 ft-lb)

Wire Composition %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
0.08	1.46	0.85	0.012	0.013	0.04	0.03	0.01	0.07

Deposition Data

Diameter	Amps	Deposition Rate	Efficiency (%)
0.8 mm (.030 in.)	100 A	1.13 kg/h (2.5 lb/h)	93 %
0.8 mm (.030 in.)	150 A	1.77 kg/h (3.9 lb/h)	93 %
0.8 mm (.030 in.)	200 A	2.95 kg/h (6.5 lb/h)	93 %
0.8 mm (.030 in.)	75 A	0.82 kg/h (1.8 lb/h)	93 %

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Deposition Data			
Diameter	Amps	Deposition Rate	Efficiency (%)
100% CO2			
0.9 mm (.035 in.)	100 A	1.18 kg/h (2.6 lb/h)	93 %
0.9 mm (.035 in.)	150 A	1.81 kg/h (4.0 lb/h)	93 %
0.9 mm (.035 in.)	200 A	2.68 kg/h (5.9 lb/h)	93 %
0.9 mm (.035 in.)	250 A	3.90 kg/h (8.6 lb/h)	93 %
0.9 mm (.035 in.)	80 A	0.91 kg/h (2.0 lb/h)	93 %
1.2 mm (.045 in.)	100 A	0.86 kg/h (1.9 lb/h)	93 %
1.2 mm (.045 in.)	125 A	1.22 kg/h (2.7 lb/h)	93 %
1.2 mm (.045 in.)	150 A	1.54 kg/h (3.4 lb/h)	93 %
1.2 mm (.045 in.)	200 A	2.40 kg/h (5.3 lb/h)	93 %
1.2 mm (.045 in.)	250 A	3.36 kg/h (7.4 lb/h)	93 %
1.2 mm (.045 in.)	300 A	4.40 kg/h (9.7 lb/h)	93 %
1.2 mm (.045 in.)	350 A	5.67 kg/h (12.5 lb/h)	93 %
1.6 mm (1/16 in.)	250 A	2.81 kg/h (6.2 lb/h)	93 %
1.6 mm (1/16 in.)	275 A	3.31 kg/h (7.3 lb/h)	93 %
1.6 mm (1/16 in.)	300 A	3.86 kg/h (8.5 lb/h)	93 %
1.6 mm (1/16 in.)	350 A	4.85 kg/h (10.7 lb/h)	93 %
1.6 mm (1/16 in.)	400 A	6.03 kg/h (13.3 lb/h)	93 %
1.6 mm (1/16 in.)	450 A	7.48 kg/h (16.5 lb/h)	93 %
75% Ar - 25% CO2			
0.8 mm (.030 in.)	100 A	1.18 kg/h (2.6 lb/h)	96 %
0.8 mm (.030 in.)	150 A	1.81 kg/h (4.0 lb/h)	96 %
0.8 mm (.030 in.)	200 A	3.04 kg/h (6.7 lb/h)	96 %
0.8 mm (.030 in.)	75 A	0.86 kg/h (1.9 lb/h)	96 %
0.9 mm (.035 in.)	100 A	1.22 kg/h (2.7 lb/h)	96 %
0.9 mm (.035 in.)	150 A	1.86 kg/h (4.1 lb/h)	96 %
0.9 mm (.035 in.)	200 A	2.72 kg/h (6.0 lb/h)	96 %
0.9 mm (.035 in.)	250 A	3.99 kg/h (8.8 lb/h)	96 %
0.9 mm (.035 in.)	80 A	0.95 kg/h (2.1 lb/h)	96 %
1.2 mm (.045 in.)	100 A	0.91 kg/h (2.0 lb/h)	96 %
1.2 mm (.045 in.)	125 A	1.27 kg/h (2.8 lb/h)	96 %
1.2 mm (.045 in.)	150 A	1.59 kg/h (3.5 lb/h)	96 %
1.2 mm (.045 in.)	200 A	2.49 kg/h (5.5 lb/h)	96 %
1.2 mm (.045 in.)	250 A	3.45 kg/h (7.6 lb/h)	96 %
1.2 mm (.045 in.)	300 A	4.53 kg/h (10.0 lb/h)	96 %

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Diameter	Amps	Deposition Rate	Efficiency (%)
1.2 mm (.045 in.)	350 A	5.85 kg/h (12.9 lb/h)	96 %
1.6 mm (1/16 in.)	250 A	2.90 kg/h (6.4 lb/h)	96 %
1.6 mm (1/16 in.)	275 A	3.45 kg/h (7.6 lb/h)	96 %
1.6 mm (1/16 in.)	300 A	3.99 kg/h (8.8 lb/h)	96 %
1.6 mm (1/16 in.)	350 A	4.99 kg/h (11.0 lb/h)	96 %
1.6 mm (1/16 in.)	400 A	6.21 kg/h (13.7 lb/h)	96 %
1.6 mm (1/16 in.)	450 A	7.76 kg/h (17.1 lb/h)	96 %
92% Ar - 8% CO₂			
0.8 mm (.030 in.)	100 A	1.18 kg/h (2.6 lb/h)	98 %
0.8 mm (.030 in.)	150 A	1.86 kg/h (4.1 lb/h)	98 %
0.8 mm (.030 in.)	200 A	3.08 kg/h (6.8 lb/h)	98 %
0.8 mm (.030 in.)	75 A	0.91 kg/h (2.0 lb/h)	98 %
0.9 mm (.035 in.)	100 A	1.22 kg/h (2.7 lb/h)	98 %
0.9 mm (.035 in.)	150 A	1.90 kg/h (4.2 lb/h)	98 %
0.9 mm (.035 in.)	200 A	2.81 kg/h (6.2 lb/h)	98 %
0.9 mm (.035 in.)	250 A	4.08 kg/h (9.0 lb/h)	98 %
0.9 mm (.035 in.)	80 A	1.00 kg/h (2.2 lb/h)	98 %
1.2 mm (.045 in.)	100 A	0.95 kg/h (2.1 lb/h)	98 %
1.2 mm (.045 in.)	125 A	1.27 kg/h (2.8 lb/h)	98 %
1.2 mm (.045 in.)	150 A	1.63 kg/h (3.6 lb/h)	98 %
1.2 mm (.045 in.)	200 A	2.54 kg/h (5.6 lb/h)	98 %
1.2 mm (.045 in.)	250 A	3.58 kg/h (7.8 lb/h)	98 %
1.2 mm (.045 in.)	300 A	4.63 kg/h (10.2 lb/h)	98 %
1.2 mm (.045 in.)	350 A	5.99 kg/h (13.2 lb/h)	98 %
1.6 mm (1/16 in.)	250 A	2.95 kg/h (6.5 lb/h)	98 %
1.6 mm (1/16 in.)	275 A	3.49 kg/h (7.7 lb/h)	98 %
1.6 mm (1/16 in.)	300 A	4.08 kg/h (9.0 lb/h)	98 %
1.6 mm (1/16 in.)	350 A	5.13 kg/h (11.3 lb/h)	98 %
1.6 mm (1/16 in.)	400 A	6.35 kg/h (14.0 lb/h)	98 %
1.6 mm (1/16 in.)	450 A	7.89 kg/h (17.4 lb/h)	98 %