OK AristoRod 12.50

The non copper coated OK AristoRod 12.50 is a manganese-silicon alloyed solid wire for GMAW of unalloyed steels, such as general structural, pressure vessel, ship building and for fine-grained carbon-manganese steels for the same purpose with a minimum yield strength of max 420 MPa. The electrode can be welded with either a gas mixture or with pure CO2 as the shielding gas. The AristoRod wires are suitable for operating at high currents with maintained disturbance free wire feeding giving a stable arc with a low amount of spatter. OK AristoRod 12.50 delivered in the unique Esab Octagonal Marathon Pac is excellent in mechanised welding applications.

Specifications	
Classifications	EN ISO 14341-A : G 38 3 C1 3Si1 EN ISO 14341-A : G 42 4 M20 3Si1 EN ISO 14341-A : G 42 4 M21 3Si1 EN ISO 14341-A : G 3Si1 SFA/AWS A5.18 : ER70S-6 CSA W48 : B-G 49A 3 C1 S6 JIS Z 3312 : YGW 12 (C1)
Approvals	ABS : 3Y SA BV : SA3YM CE : EN 13479 DB : 42.039.29 DNV-GL : III YMS LR : 3YS H15 PRS : 3YS RS : 3YMS VdTÜV : 10052 CWB : B-G 49A 3 C1 S6 JIS : YGW12 (C1) NAKS/HAKC : 1.0-1.6 mm NAKS/HAKC : 1.2-1.6 mm RINA : 3Y S RINA : 3Y S

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

Alloy Type	Carbon-manganese steel (Mn/Si-alloyed)

Typical Tensile Properties				
Condition	**Yield Strength**	**Tensile Strength**	**Elongation**	**Reduction in Area**
100% CO2				
As Welded	448 MPa (65 ksi)	538 MPa (78 ksi)	25 %	70 %
75% Ar - 25% CO2				
As Welded	455 MPa (66 ksi)	565 MPa (82 ksi)	28 %	61 %
90% Ar - 10% CO2				
As Welded	510 MPa (74 ksi)	586 MPa (85 ksi)	30 %	56 %

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)

Typical 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

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Deposition Data			
Diameter	**Current**	**Deposition Efficiency (%)**	**Deposition Rate**
100% CO2			
0.8 mm (.030 in.)	150 A	93 %	1.77 kg/h (3.9 lbs/h)
0.8 mm (.030 in.)	100 A	93 %	1.13 kg/h (2.5 lbs/h)
1.6 mm (1/16 in.)	300 A	93 %	3.86 kg/h (8.5 lbs/h)
0.9 mm (.035 in.)	200 A	93 %	2.68 kg/h (5.9 lbs/h)
1.2 mm (.045 in.)	350 A	93 %	5.67 kg/h (12.5 lbs/h)
1.2 mm (.045 in.)	125 A	93 %	1.22 kg/h (2.7 lbs/h)
1.2 mm (.045 in.)	250 A	93 %	3.36 kg/h (7.4 lbs/h)
0.9 mm (.035 in.)	80 A	93 %	0.91 kg/h (2.0 lbs/h)
1.6 mm (1/16 in.)	275 A	93 %	3.31 kg/h (7.3 lbs/h)
0.9 mm (.035 in.)	100 A	93 %	1.18 kg/h (2.6 lbs/h)
1.6 mm (1/16 in.)	450 A	93 %	7.48 kg/h (16.5 lbs/h)
1.2 mm (.045 in.)	200 A	93 %	2.40 kg/h (5.3 lbs/h)
1.6 mm (1/16 in.)	400 A	93 %	6.03 kg/h (13.3 lbs/h)
0.8 mm (.030 in.)	75 A	93 %	0.82 kg/h (1.8 lbs/h)
0.9 mm (.035 in.)	150 A	93 %	1.81 kg/h (4.0 lbs/h)
1.2 mm (.045 in.)	100 A	93 %	0.86 kg/h (1.9 lbs/h)
1.2 mm (.045 in.)	150 A	93 %	1.54 kg/h (3.4 lbs/h)
1.6 mm (1/16 in.)	250 A	93 %	2.81 kg/h (6.2 lbs/h)
0.8 mm (.030 in.)	200 A	93 %	2.95 kg/h (6.5 lbs/h)
1.2 mm (.045 in.)	300 A	93 %	4.40 kg/h (9.7 lbs/h)
1.6 mm (1/16 in.)	350 A	93 %	4.85 kg/h (10.7 lbs/h)
0.9 mm (.035 in.)	250 A	93 %	3.90 kg/h (8.6 lbs/h)
75% Ar - 25% CO2			
1.6 mm (1/16 in.)	275 A	96 %	3.45 kg/h (7.6 lbs/h)
0.8 mm (.030 in.)	200 A	96 %	3.04 kg/h (6.7 lbs/h)
0.8 mm (.030 in.)	100 A	96 %	1.18 kg/h (2.6 lbs/h)
1.2 mm (.045 in.)	150 A	96 %	1.59 kg/h (3.5 lbs/h)
0.9 mm (.035 in.)	100 A	96 %	1.22 kg/h (2.7 lbs/h)
1.6 mm (1/16 in.)	300 A	96 %	3.99 kg/h (8.8 lbs/h)
1.6 mm (1/16 in.)	350 A	96 %	4.99 kg/h (11.0 lbs/h)
1.6 mm (1/16 in.)	400 A	96 %	6.21 kg/h (13.7 lbs/h)
1.2 mm (.045 in.)	250 A	96 %	3.45 kg/h (7.6 lbs/h)
1.2 mm (.045 in.)	200 A	96 %	2.49 kg/h (5.5 lbs/h)
1.2 mm (.045 in.)	100 A	96 %	0.91 kg/h (2.0 lbs/h)
1.6 mm (1/16 in.)	450 A	96 %	7.76 kg/h (17.1 lbs/h)
0.8 mm (.030 in.)	75 A	96 %	0.86 kg/h (1.9 lbs/h)
0.9 mm (.035 in.)	80 A	96 %	0.95 kg/h (2.1 lbs/h)
1.2 mm (.045 in.)	350 A	96 %	5.85 kg/h (12.9 lbs/h)
0.9 mm (.035 in.)	250 A	96 %	3.99 kg/h (8.8 lbs/h)
0.9 mm (.035 in.)	150 A	96 %	1.86 kg/h (4.1 lbs/h)
0.8 mm (.030 in.)	150 A	96 %	1.81 kg/h (4.0 lbs/h)
1.2 mm (.045 in.)	125 A	96 %	1.27 kg/h (2.8 lbs/h)
1.6 mm (1/16 in.)	250 A	96 %	2.90 kg/h (6.4 lbs/h)
0.9 mm (.035 in.)	200 A	96 %	2.72 kg/h (6.0 lbs/h)
1.2 mm (.045 in.)	300 A	96 %	4.53 kg/h (10.0 lbs/h)

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