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 CWB : B-G 49A 3 C1 S6 DB : 42.039.29 DNV : III YMS JIS : YGW12 LR : 3YS H15 PRS : 3YS (C1, M21) UKCA : EN 13479 VdTÜV : 10052 CWB : B-G 49A 3 Z S6 RINA : 3 YS RINA : 3Y S

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

Alloy Type	Carbon-manganese steel (Mn/Si-alloyed)
Shielding Gas	M20, M21, C1 (EN ISO 14175)

Typical Tensile Properties			
Condition	**Yield Strength**	**Tensile Strength**	**Elongation**
AWS C1			
As Welded	430 MPa	530 MPa	30 %
EN C1			
As Welded	440 MPa	540 MPa	25 %
EN M21			
As Welded	470 MPa	560 MPa	26 %
Stress Relieved 15 hour(s) 620 °C	370 MPa	495 MPa	28 %

Typical Charpy V-Notch Properties		
Condition	**Testing Temperature**	**Impact Value**
AWS C1		
As Welded	-30 °C	75 J
EN C1		
As Welded	20 °C	110 J
As Welded	-30 °C	75 J
EN M21		
As Welded	20 °C	130 J

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Typical Charpy V-Notch Properties		
Condition	**Testing Temperature**	**Impact Value**
Stress Relieved 15 hour(s) 620 °C	20 °C	120 J
As Welded	-20 °C	120 J
Stress Relieved 15 hour(s) 620 °C	-20 °C	90 J
As Welded	-30 °C	100 J
As Welded	-40 °C	90 J
As Welded	-50 °C	70 J

Typical Weld Metal Analysis %						
C	**Mn**	**Si**	**S**	**P**	**Cu**	**Ti+Zr**
C1						
0.08	0.94	0.63	0.012	0.013	0	<0
M21						
0.10	1.11	0.72	0.012	0.013	0.07	<0

Typical Wire Composition %		
C	**Mn**	**Si**
0.08	1.46	0.85

Deposition Data				
Diameter	**Current**	**Voltage**	**Wire Feed Speed**	**Deposition Rate**
0.8 mm	60-200 A	18-24 V	3.2-10.0 m/min	0.8-2.3 kg/h
0.9 mm	70-250 A	18-26 V	3.0-12.0 m/min	0.9-3.5 kg/h
1.0 mm	80-300 A	18-32 V	2.7-15.0 m/min	1.0-5.5 kg/h
1.14 mm	100-350 A	18-34 V	2.6-15.0 m/min	1.2-7.0 kg/h
1.2 mm	120-380 A	18-35 V	2.5-15.0 m/min	1.3-8.0 kg/h
1.32 mm	130-400 A	19-35 V	2.4-15.0 m/min	1.5-8.5 kg/h
1.4 mm	150-420 A	22-36 V	2.3-12.0 m/min	1.6-8.7 kg/h
1.6 mm	225-550 A	28-38 V	2.3-10.0 m/min	2.1-9.4 kg/h
2.0 mm	300-650 A	32-44 V	3.0-7.0 m/min	4.4-10.2 kg/h