

OK AristoRod 12.63

A non copper coated G4Si1/ER70S-6 solid wire with a carefully controlled wire chemistry and a unique surface technology that serves for high feeding and welding performance providing a superior weld metal quality at high currents. Compared with OK AristoRod 12.50, OK AristoRod 12.63 has a slightly higher silicon and manganese content, which increases the weld metal strength. The high silicon content promotes low sensitivity to surface impurities and contributes to smooth, sound welds. The wire is designed for welding of all general structural and engineering unalloyed and low-alloyed carbon-manganese steels. OK AristoRod 12.63 delivered in the unique Esab Octagonal Marathon Pac is an excellent choice in mechanised welding applications

Specifications	
Classifications	EN ISO 14341-A : G 42 3 C1 4Si1 EN ISO 14341-A : G 46 5 M20 4Si1 EN ISO 14341-A : G 46 5 M21 4Si1 EN ISO 14341-B : G 55A 5 M21 S6 EN ISO 14341-A : G 4Si1 SFA/AWS A5.18 : ER70S-6 CSA W48 : B-G 49A 3 C1 S6 EN ISO 14341-B : G S6
Approvals	ABS : 3Y SA BV : SA3YM (C1, M21) CE : EN 13479 CWB : B-G 49A 3 C1 S6 DB : 42.039.30 DNV-GL : III YMS (C1, M21) LR : 3YS H15 (C1, M21) UKCA : EN 13479 VdTÜV : 10051

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	450 MPa	550 MPa	30 %
EN C1			
As Welded	460 MPa	570 MPa	28 %
EN M20			
As Welded	528 MPa	617 MPa	22 %
EN M21			
As Welded	490 MPa	590 MPa	29 %
Stress Relieved 15 hour(s) 650 °C	385 MPa	520 MPa	-

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
AWS C1		
As Welded	-30 °C	100 J
EN C1		
As Welded	20 °C	110 J
As Welded	-30 °C	75 J
EN M20		
As Welded	-50 °C	102 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) 650 °C	20 °C	120 J
As Welded	-20 °C	120 J
Stress Relieved 15 hour(s) 650 °C	-20 °C	90 J
As Welded	-30 °C	100 J
As Welded	-40 °C	90 J
As Welded	-50 °C	80 J

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Cu
C1					
0.09	1.08	0.70	0.013	0.013	0.05
M20					
0.07	1.39	0.67	0.009	0.01	0.04
M21					
0.10	1.28	0.80	0.013	0.013	0.05

Typical Wire Composition %

C	Mn	Si
0.074	1.68	0.95

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
0.8 mm	60-185 A	18-24 V	3.2-10.0 m/min	0.8-2.5 kg/h
0.9 mm	70-250 A	18-26 V	3.0-12.0 m/min	0.8-3.3 kg/h
1.0 mm	80-300 A	18-32 V	2.7-15.0 m/min	1.0-5.5 kg/h
1.2 mm	120-380 A	18-35 V	2.3-15.0 m/min	1.2-8.0 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	2.3-12.0 m/min	2.1-11.4 kg/h