

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

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Classifications	EN ISO 14341-A : G 42 3 C1 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 : 3YSA (C1) ABS : 3YSA (M21) BV : SA3YM (C1 & M21) CE : EN 13479 CWB : B-G 49A 3 C1 S6 DB : 42.039.30 DNV-GL : III YMS (C1) DNV-GL : III YMS (M21) LR : 3YS H15 (C1) LR : 3YS H15 (M21) NAKS/HAKC : 1.0 - 1.2MM VdTÜV : 10051

Alloy Type

Carbon-manganese steel (Mn/Si-alloyed)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
EN 80Ar/20CO2 (M21)			
As Welded	490 MPa	590 MPa	29 %
Stress Relieved 15 hour(s) 650 °C	385 MPa	520 MPa	
EN CO2 (C1)			
As Welded	460 MPa	570 MPa	28 %
AWS CO2 (C1)			
As Welded	450 MPa	550 MPa	30 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
EN 80Ar/20CO2 (M21)		
As Welded	-40 °C	90 J
As Welded	-20 °C	120 J
As Welded	-30 °C	100 J
As Welded	20 °C	130 J
As Welded	-50 °C	80 J
Stress Relieved	-20 °C	90 J
Stress Relieved	20 °C	120 J
EN CO2 (C1)		
As Welded	-30 °C	75 J
As Welded	20 °C	110 J

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Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
AWS CO2 (C1)		
As Welded	-30 °C	100 J

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Cu
CO2 (C1)					
0.10	1.28	0.80	0.013	0.013	0.05
Ar/20CO2 (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