

OK AristoRod 12.63

OK AristoRod 12.63 is a bare Mn-Si-alloyed G4Si1/ER70S-6 solid wire for the GMAW of non-alloyed steels, as used in general construction, automotive components, pressure vessel fabrication and shipbuilding. It has a slightly higher manganese and silicon content than OK AristoRod 12.50 to increase the weld metal strength. This also promotes a low sensitivity to surface impurities and contributes to smooth, sound welds. OK AristoRod 12.63 is treated with ESAB's unique Advanced Surface Characteristics (ASC) technology, taking 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 Weld Metal:	EN ISO 14341-A:G 42 3 C1 4Si1, EN ISO 14341-A:G 46 4 M21 4Si1, EN ISO 14341-B:G 55A 5 M21 S6
Classifications Wire Electrode:	SFA/AWS A5.18:ER70S-6, CAN/CSA-ISO 14341-B:G 49A 3 C1 S6, EN ISO 14341-A:G 4Si1, EN ISO 14341-B:G S6
Approvals:	CE EN 13479, DNV III YMS (M21), ABS 3YSA (M21), CWB B-G 49A 3 C1 S6 (B-G 49A 3 C G6), ABS 3YSA (C1), DB 42.039.30, DNV III YMS (C1), GL 3YS (C1), LR 3YS H15 (C1), LR 3YS H15 (M21), NAKS/HAKC 1.2MM, VdTÜV 10051, BV SA3YM (C1 & M21)

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

Alloy Type:	Carbon-manganese steel (Mn/Si-alloyed)
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Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
EN 80Ar/20CO2 (M21)			
As welded	495 MPa	580 MPa	29 %
Stress relieved 15 hr 650 °C	395 MPa	520 MPa	28 %
EN CO2 (C1)			
As welded	485 MPa	570 MPa	28 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
EN 80Ar/20CO2 (M21)		
As welded	20 °C	130 J
As welded	-20 °C	90 J
As welded	-30 °C	70 J
As welded	-40 °C	60 J
Stress relieved 15 hr 650 °C	20 °C	120 J
Stress relieved 15 hr 650 °C	-20 °C	90 J
EN CO2 (C1)		
As welded	20 °C	110 J
As welded	-30 °C	76 J

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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 m/min	0,8-2,5 kg/h
0.9 mm	70-250 A	18-26 V	3-12 m/min	0,8-3,3 kg/h
1.0 mm	80-300 A	18-32 V	2,7-15 m/min	1-5,5 kg/h
1.2 mm	120-380 A	18-35 V	2,3-15 m/min	1,2-8 kg/h
1.4 mm	120-380 A	18-35 V	2,3-15 m/min	1,2-8 kg/h
1.6 mm	120-380 A	18-35 V	2,3-15 m/min	1,2-8 kg/h