

OK Autrod 12.58

OK Autrod 12.58 is a copper-coated, Mn-Si-alloyed G2Si/ER70S-3 solid wire for the GMAW of non-alloyed steels, as used in general construction, pressure vessel fabrication and shipbuilding. The wire has a carefully controlled wire chemistry and a unique surface technology providing superior weld -metal quality at high wire feed speeds and at high welding currents. The wire can be used with both Ar/CO₂ mixed gas and pure CO₂ shielding gas.

Classifications Weld Metal:	EN ISO 14341-A:G 35 2 C1 2Si, EN ISO 14341-A:G 38 3 M21 2Si
Classifications Wire Electrode:	EN ISO 14341-A:G 2Si, SFA/AWS A5.18:ER70S-3
Approvals:	CE EN 13479, ABS 3YSA (M21), ABS 3YSA (C1), BV SA3YM (C1&M21), LR 3YS H15 (C1), LR 3YS H15 (M21), DB 42.039.17, GL 3YS (C1&M21), LR 3YM H15 (C1), LR 3YM H15 (M21), VdTÜV 07653

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	430 MPa	515 MPa	26 %
EN CO₂ (C1)			
As welded	410 MPa	500 MPa	30 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
EN 80Ar/20CO₂ (M21)		
As welded	20 °C	140 J
As welded	-20 °C	130 J
As welded	-30 °C	90 J
EN CO₂ (C1)		
As welded	20 °C	125 J
As welded	-20 °C	90 J

Typical Wire Composition %

C	Mn	Si
0.074	1.05	0.55

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Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
0.6 mm	30-100 A	15-20 V	5,5-13 m/min	0,7-1,7 kg/h
0.8 mm	60-200 A	18-24 V	3,2-10 m/min	0,8-3 kg/h
0.9 mm	70-250 A	18-26 V	3-12 m/min	0,9-3,6 kg/h
1.0 mm	80-300 A	18-32 V	2,7-15 m/min	1-5,6 kg/h
1.2 mm	120-380 A	18-34 V	2,5-15 m/min	1,3-8 kg/h
1.6 mm	225-550 A	28-38 V	2.3-12 m/min	2.1-11.4 kg/h