

OK Autrod 12.58

A copper coated, G2Si/ER70S-3 solid wire for GMAW of all general structural and engineering unalloyed and low-alloyed carbon-manganese steels. The electrode may be welded with either a gas mixture or with pure CO₂ as the shielding gas. OK Autrod 12.58 can even be delivered in the unique Esab Octagonal Marathon Pac, which is an excellent choice in mechanised welding applications

Specifications

Classifications	EN ISO 14341-A : G 35 2 C1 2Si EN ISO 14341-A : G 38 3 M21 2Si EN ISO 14341-A : G 2Si SFA/AWS A5.18 : ER70S-3 CSA W48 : B-G 49A 2 C1 S3
Approvals	ABS : 3YSA (C1&M21) BV : SA3YM (C1&M21) CE : EN 13479 CWB : B-G 49A 2 C1 S3 DB : 42.039.17 DNV-GL : III YMS (C1) DNV-GL : III YMS (M21) LR : 3Y H15 (C1) LR : 3Y H15 (M21) LR : 3YS H15 (C1&M21) VdTÜV : 07653

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 Weld Metal Analysis %

C	Mn	Si	S	P
CO₂ (C1)				
0.08	0,67	0.41	0.011	0.015
Ar/20CO₂ (M21)				
0.10	0.80	0.46	0.011	0.015

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	5.5-13.0 m/min	0.7-1.7 kg/h
0.8 mm	60-200 A	18-24 V	3.2-10.0 m/min	0.8-3.0 kg/h
0.9 mm	70-250 A	18-26 V	3.0-12.0 m/min	0.9-3.6 kg/h
1.0 mm	80-300 A	18-32 V	2.7-15.0 m/min	1.0-5.6 kg/h
1.2 mm	120-380 A	18-34 V	2.5-15.0 m/min	1.3-8.0 kg/h
1.6 mm	225-550 A	28-38 V	2.3-12.0 m/min	2.1-11.4 kg/h