

## OK Aristorod 12.57

The non copper coated OK AristoRod 12.57 is a manganese-silicon bearing solid wire for welding of unalloyed steels, such as general structural, pressure vessel and ship building steels with a minimum tensile strength of 500 MPa, and for fine-grained carbon-manganese steels for the same purpose with a minimum yield strength of max 400 MPa. The electrode can be welded with Ar/20CO<sub>2</sub> or with pure CO<sub>2</sub> as the shielding gas. The wire electrode is suitable for welding at high currents.

<b>Classifications Weld Metal</b>	EN ISO 14341-A : G 35 2 C1 2Si EN ISO 14341-A : G 38 3 M21 2Si
<b>Classifications Wire Electrode</b>	SFA/AWS A5.18 : ER70S-3 EN ISO 14341-A : G 2Si CAN/CSA-ISO 14341 : B-G 49A 2 C1 S3
<b>Approvals</b>	CE EN 13479 CWB B-G 49A 2 C1 S3 DB 42.039.10 VdTUV 10615

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

<b>Alloy Type</b>	Carbon-manganese steel (Mn/Si-alloyed)
<b>Shielding Gas</b>	M20, M21, C1 (EN ISO 14175)

### Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
<b>EN CO<sub>2</sub> (C1)</b>			
As Welded	385 MPa	485 MPa	25 %
<b>EN 80Ar/20CO<sub>2</sub> (M21)</b>			
As Welded	430 MPa	515 MPa	26 %

### Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
<b>EN CO<sub>2</sub> (C1)</b>		
As Welded	20 °C	125 J
As Welded	-20 °C	90 J
<b>EN 80Ar/20CO<sub>2</sub> (M21)</b>		
As Welded	20 °C	140 J
As Welded	-20 °C	110 J
As Welded	-30 °C	90 J

### Typical Weld Metal Analysis %

C	Mn	Si	S	P	Cu
0.10	0.80	0.46	0.011	0.015	0,07

### Typical Wire Composition %

C	Mn	Si
0.074	1.05	0.55

### Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
0.9 mm	70-250 A	18-26 V	3.0-12.0 m/min	0.9-3.5 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	120-380 A	18-34 V	2.5-15.0 m/min	1.3-8.0 kg/h