



# Product Data Sheet

G 'Gas-shielded metal-arc welding'

OK AristoRod 12.50 HP

Prepared by A-C Thorsson	Qualified by Magnus Johansson	Approved by Raj Kumar Singh	Reg no EN012097	Cancelling None	Reg date 2026-02-05	Page 1 (2)
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## REASON FOR ISSUE

New Product

## GENERAL

A non copper coated, G3Si1/ER70S-6 solid wire for GMAW of unalloyed and low-alloyed carbon-manganese steels, with an unique surface technology. OK AristoRod 12.50 HP has excellent feedability, very consistent welding performance and is particularly suited to be used in all general structural and engineering unalloyed and low-alloyed carbon-manganese steels for the same purpose with a minimum yield strength of 460 MPa in robotic applications. The wire may be welded with either a gas mixture or with pure CO<sub>2</sub> as shielding gas. The AristoRod wires are suitable for operating at high currents with maintained disturbance free wire feeding giving a stable arc with a low amount of spatter.

OK AristoRod 12.50 HP delivered in the unique Esab Octagonal Marathon Pac and Marathon Pac Ultra, is excellent in mechanised welding applications.

**Shielding Gas:** M20, M21, C1 (EN ISO 14175)

**Alloy Type:** Carbon-manganese steel (Mn/Si-alloyed)

### CLASSIFICATIONS Weld Metal

EN ISO 14341-A	G 38 3 C1 3Si1
EN ISO 14341-A	G 46 4 M20 3Si1
EN ISO 14341-A	G 46 4 M21 3Si1

### APPROVALS

CE	EN 13479
UKCA	EN 13479

### CLASSIFICATIONS Wire Electrode

EN ISO 14341-A	G 3Si1
SFA/AWS A5.18	ER70S-6

## CHEMICAL COMPOSITION

	Wire/Strip (%)	
	Min	Max
C	0.07	0.14
Si	0.80	1.00
Mn	1.40	1.60
P		0.020
S		0.025

## MECHANICAL PROPERTIES OF WELD METAL

### All Weld Metal

Standard	Shielding Gas	Condition	Rp0.2 [MPa/ksi]		ReL [MPa/ksi]		Rm [MPa/ksi]			A4 [%]		A5 [%]	
			Min	Typ	Min	Typ	Min	Max	Typ	Min	Typ	Min	Typ
AWS	C1	As welded	400/58				480/70			22			
EN	M21	As welded			460/67	510/74	530/77	680/99	600/87			20	27
EN	M20	As welded			460/67	520/75	530/77	680/99	610/88			20	25
EN	C1	As welded			380/55	480/70	470/68	600/87	580/84			20	28

Comments:





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## MECHANICAL PROPERTIES OF WELD METAL

Standard	Shielding Gas	Condition	Temp [°C/°F]	Charpy V [J/ft-lb]	
				Min	Typ
AWS	C1	As welded	-30/-22 -40/-40	27/20	
EN	M21	As welded	-30/-22 -40/-40	47/35	125/93
EN	M20	As welded	-30/-22 -40/-40	47/35	125/93
EN	C1	As welded	-30/-22 -40/-40	47/35	100/74

Comments:

## ECONOMICS & CURRENT DATA

Dimension	Current (A)		W	$\eta$	H			Feed			U		
	Min	Max			Nom	Nom	Min	Max	Nom	Min	Max	Nom	Min
1.0 mm (0.040 in.)	80	300	16	96	1.0 kg/h (2.2 lb/h)	5.5 kg/h (12.1 lb/h)		2.7 m/min (106 in/min)	15.0 m/min (591 in/min)		18	32	
1.2 mm (0.047 in.)	120	380	18	97	1.3 kg/h (2.9 lb/h)	8.0 kg/h (17.6 lb/h)		2.5 m/min (98 in/min)	15.0 m/min (591 in/min)		18	35	

- W** = Gas consumption (l/min)  
 **$\eta$**  = Filler metal efficiency (g weld metal x 100 / g wire)(%)  
**H** = Deposition rate (kg weld metal/hour arc time)  
**Feed** = Wire feed speed (m/min)  
**U** = Arc voltage (V)

