



Product Data Sheet

G 'Gas-shielded metal-arc welding'

OK AristoRod 12.50

Signed by Mats Linde	Approved by Per Sundberg/Barbro Karlström	Reg no EN002126	Cancelling EN000979	Reg date 2004-06-08	Page 1 (2)
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REASON FOR ISSUE

New base type.

GENERAL

The non copper coated OK AristoRod 12.50 is a manganese-silicon alloyed solid wire for GMAW of unalloyed steels, such as general structural, pressure vessel, ship building and for fine-grained carbon-manganese steels for the same purpose with a minimum yield strength of max 420 MPa. The electrode can be welded with Ar/20CO₂ or with pure CO₂ as the 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 delivered in the unique Esab Octagonal Marathon Pac is excellent in mechanised welding applications.

Shielding Gas: M21, C1 (EN 439)

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

CLASSIFICATIONS Weld Metal

EN 440	G 38 2 C G3Si1
EN 440	G 42 3 M G3Si1

CLASSIFICATIONS Wire Electrode

EN 440	G3Si1
SFA/AWS A5.18	ER70S-6

APPROVALS

Ü	42.039/1
ABS	3SA, 3YSA
BV	SA3YM
CWB	CSA W48
DB	42.039.29
DNV	III YMS
DS	EN 440
GL	3YS
LR	3S, 3YS
VdTÜV	10052

CHEMICAL COMPOSITION

Compound	All Weld Metal (%)		Wire/Strip (%)	
	CO ₂ (C1)	80Ar/20CO ₂ (M21)	Min	Max
C	0.08	0.10	0.06	0.14
Si	0.63	0.72	0.80	1.00
Mn	0.94	1.11	1.40	1.60
P	0.013	0.013		0.025
S	0.012	0.012		0.025
Cu	0,07	0.07		0.15



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MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Properties	CO2 (C1) AWS	20Ar/20CO2 (M21) EN			20Ar/20CO2 (M21) EN	CO2 (C1) EN		
	As welded	As welded			Stress relieved 620°C 15h	As welded		
	Min	Min	Max	Typ	Typ	Min	Max	Typ
Rp0.2 (MPa)	400							
ReL (MPa)		420		470	370	380		440
ReH (MPa)				480	380			450
Rm (MPa)	480	500	640	560	495	470	600	540
A4-A5 (%)	22	20		26	28	20		25
Z (%)				68	73			70
Charpy V at 20°C (J)				130	120			110
Charpy V at -20°C (J)				90	90	47		70
Charpy V at -29°C (J)	27							
Charpy V at -30°C (J)		47		70				
Comments:	Elongation=A4	Comments:			Elongation=A5	Comments:		
		Elongation=A5			Elongation=A5	Elongation=A5		

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed		U		
	Min	Max			Nom	Nom	Min	Max	Min	Max	Min
\emptyset											
0.8	60	200	14	95	0.8	2.5	3.2	10.0	18	24	
0.9	70	250	15	96	0.8	3.3	3.0	12.0	18	26	
1.0	80	300	16	96	1.0	5.5	2.7	15.0	18	32	
1.14	80	300	16	96	1.0	5.5	2.7	15.0	18	32	
1.2	120	380	18	97	1.3	8.0	2.5	15.0	18	35	
1.32	80	300	16	96	1.0	5.5	2.7	15.0	18	32	
1.4	150	420	19	97	1.6	8.7	2.3	12.0	22	36	
1.6	225	550	20	98	2.1	11.4	2.3	15.0	28	38	

W = Gas consumption (l / min)

η = Recovery, g weld metal / 100g wire (%)

H = Deposit rate (kg weld metal / hour arc time)

Feed = Feeding rate (m/min)

U = Arc voltage (V)