Product Data Sheet

G 'Gas-shielded metal-arc welding'

OK AristoRod 13.09

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
Mats Linde	P-O Oskarsson	Helene Rasmuson	EN007383	EN006084	2016-09-29	1 (2)

REASON FOR ISSUE

SFA/AWS A5.28 classification updated.

GENERAL

The non copper coated OK AristoRod 13.09 is a low-alloyed, molybdenum (0,5% Mo), solid wire for GMAW of creep resistant steels of the same type, such as pipes in pressure vessels and boilers with a working temperature of up to 500 °C.

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 13.09 delivered in the unique Esab Octagonal Marathon Pac is excellent in mechanised welding applications.

Shielding Gas: M21, C1 (EN ISO 14175)

Alloy Type: Low alloyed (0.5 % Mo)

CLASSIFICATIONS Weld Metal

EN ISO 14341-A	G 38 0 C1 2Mo
EN ISO 14341-A	G 46 2 M21 2Mo

CLASSIFICATIONS Wire Electrode

EN ISO 14341-A	G 2Mo
EN ISO 21952-A	G MoSi
EN ISO 21952-B	G 1M3
SFA/AWS A5.28	ER70S-A1 (ER80S-G)

APPROVALS

CE	EN 13479
DB	42.039.31
DNV-GL	III YMS (M21)
NAKS/HAKC	1.2MM
VdTÜV	10088

APPROVAL COMMENT

Valid for lotnumbers starting with PV

CHEMICAL COMPOSITION

	All Weld Metal (%)		Wire/Strip (%)	
	80Ar/20CO2	CO2		
	Nom	**Nom**	**Min**	**Max**
C	0.1	0.09	0.08	0.12
Si	0.7	0.65	0.50	0.70
Mn	1.1	1.0	0.90	1.30
P	0.010	0.010		0.020
S	0.015	0.015		0.020
Cr				0.15
Ni				0.20
Mo	0.5	0.45	0.40	0.60
Cu				0.15

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MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

	80Ar/20CO2	80Ar/20CO2			80Ar/20CO2	80Ar/20CO2
	As welded+	As welded			Stress relieved+ 620°C 15h	Stress relieved 620°C 15h
Properties	**Typ**	**Min**	**Max**	**Typ**	**Typ**	**Typ**
Rp0.2 (MPa)	425	460		515	370	430
ReL (MPa)				515		
Rm (MPa)	570	530	680	630	490	545
A4-A5 (%)	20				23	26
A5 (%)		20		26		
Z (%)	60			68	67	70
Charpy V at 20°C (J)				117		150
Charpy V at 0°C (J)						130
Charpy V at -20°C (J)		47		75		95
Charpy V at -40°C (J)				57		90
	Comments: Tested at 450°C	Comments: Tested at 20°C			Comments: Tested at 450°C	Comments: Tested at 20°C

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed		U	
Ø	Min	Max	Nom	Nom	Min	Max	Min	Max	Min	Max
0.8	40	170	12		0,4	2,6	2	10,8	16	22
1.0	80	280	14		1	5,4	2,7	14,7	18	28
1.2	120	350	18		1,5	6,6	2,7	12,4	20	33
1.6	225	480	30		3,3	11.6	3,10	12	26	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)