



Product Data Sheet

G 'Gas-shielded metal-arc welding'

OK AristoRod 12.63

Prepared by Mats Linde	Qualified by P-O Oskarsson	Approved by Helene Rasmuson	Reg no EN007539	Cancelling EN006592	Reg date 2017-04-28	Page 1 (2)
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REASON FOR ISSUE

Classification and mechanical data updated.

GENERAL

A non copper coated G4Si1/ER70S-6 solid wire with a carefully controlled wire chemistry and a unique surface technology that serves for high feeding and welding performance providing a superior weld metal quality at high currents. Compared with OK AristoRod 12.50, OK AristoRod 12.63 has a slightly higher silicon and manganese content, which increases the weld metal strength. The high silicon content promotes low sensitivity to surface impurities and contributes to smooth, sound welds. The wire is designed for welding of all general structural and engineering unalloyed and low-alloyed carbon-manganese steels.

OK AristoRod 12.63 delivered in the unique Esab Octagonal Marathon Pac is an excellent choice 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 42 3 C1 4Si1
EN ISO 14341-A	G 46 4 M21 4Si1
EN ISO 14341-B	G 55A 5 M21 S6

CLASSIFICATIONS Wire Electrode

EN ISO 14341-A	G 4Si1
SFA/AWS A5.18	ER70S-6
CAN/CSA-ISO 14341	B-G 49A 3 C1 S6
EN ISO 14341-B	G S6

APPROVALS

ABS	3YSA (C1 & M21)
BV	SA3YM (C1 & M21)
CE	EN 13479
CWB	B-G 49A 3 C1 S6 (B-G 49A 3 C G6)
DB	42.039.30
DNV-GL	III YMS (C1)
DNV-GL	III YMS (M21)
LR	3YS H15 (C1 & M21)
NAKS/HAKC	1.2MM
VdTÜV	10051

CHEMICAL COMPOSITION

	All Weld Metal (%)		Wire/Strip (%)	
	Ar/20CO2 (M21) Nom	CO2 (C1) Nom	Min	Max
C	0.10	0.09	0.06	0.14
Si	0.80	0.70	0.80	1.15
Mn	1.28	1.08	1.60	1.85
P	0.013	0.013		0.025
S	0.013	0.013		0.025
Cu	0.05	0.05		0.15



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MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Properties	EN 80Ar/20CO2 (M21) As welded			EN 80Ar/20CO2 (M21) Stress relieved 650°C 15h	AWS CO2 (C1) As welded		EN CO2 (C1) As welded		
	Min	Max	Typ	Typ	Min	Typ	Min	Max	Typ
Rp0.2 (MPa)					400	450			
ReL (MPa)	460		490	385			420		460
Rm (MPa)	530	680	590	520	480	550	500	640	570
A4 (%)					22	30			
A5 (%)	20		29				20		28
Charpy V at 20°C (J)			130	120					110
Charpy V at -20°C (J)			120	90					
Charpy V at -30°C (J)			100						
Charpy V at -40°C (J)	47		90		27	100	47		75
Charpy V at -50°C (J)			80						

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W Nom	η Nom	H		Feed		U	
	Min	Max			Min	Max	Min	Max	Min	Max
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0.8	60	185	14	95	0,8	2,5	3,2	10	18	24
0.9	70	250	15	96	0,8	3,3	3	12	18	26
1.0	80	300	16	96	1	5,5	2,7	15	18	32
1.2	120	380	18	97	1,2	8	2,3	15	18	35
1.4	150	420	19	97	1,6	8,7	2,3	12	22	36
1.6	225	550	20	98	2,1	11,4	2,3	12	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)