



# Product Data Sheet

G 'Gas-shielded metal-arc welding'

# OK AristoRod 12.63

Signed by Mats Linde	Approved by Per Sundberg/Barbro Karlström	Reg no EN003305	Cancelling EN003236	Reg date 2006-05-08	Page 1 (2)
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## REASON FOR ISSUE

CE marking added and applicable approvals deleted.

## 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:** M21, C1 (EN 439)

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

### CLASSIFICATIONS Weld Metal

EN 440	G 42 2 C G4Si1
EN 440	G 46 4 M G4Si1

### CLASSIFICATIONS Wire Electrode

EN 440	G4Si1
SFA/AWS A5.18	ER70S-6
CSA W48	ER49S-6

### APPROVALS

ABS	3SA, 3YSA
BV	SA3YM
CE	EN 13479
CWB	CSA W48 "valid for items ending with A"
DB	42.039.30
DNV	III YMS
GL	3YS
LR	3S, 3YS
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/20CO <sub>2</sub> (M21)			EN 80Ar/20CO <sub>2</sub> (M21)		EN 80Ar/20CO <sub>2</sub> (M21)		AWS CO <sub>2</sub> (C1)		EN CO <sub>2</sub> (C1)		
	Min	Max	Typ	Typ	Typ	Min	Min	Max	Typ			
	As welded			Stress relieved 650°C 15h		Stress relieved 650°C 15h		As welded		As welded		
Rp0.2 (MPa)				385	385	400			420	475		
ReL (MPa)	460	525		395	395					485		
ReH (MPa)				520	520	480	500	640	570			
Rm (MPa)	530	680	595	28	28	22	20		25			
A4-A5 (%)	20			73	73				70			
Z (%)				120	120					110		
Charpy V at 20°C (J)	130			90	90				47	70		
Charpy V at -20°C (J)	90											
Charpy V at -29°C (J)	70					27						
Charpy V at -30°C (J)	47			60								
Charpy V at -40°C (J)												
Comments:				Comments:	Comments:	Comments:	Elongation=A4		Comments: Elongation=A5			

## ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed		U	
	Min	Max			Min	Max	Min	Max	Min	Max
Ø			Nom	Nom						
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
1.6	120	380	20	98	1,2	8	2,3	15	18	35

**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)