

## OK AristoRod<sup>™</sup> welders love it and so do robots

A FAMILY OF NON COPPER COATED MAG WIRES WITH SUPERIOR WELDING PERFORMANCE



## ESAB OK AristoRod<sup>™</sup> with Advanced Surface Characteristics



New ASC wire surface technology! OK AristoRod<sup>™</sup> MAG welding wires with Advanced Surface Characteristics resist corrosion during storage, improves feedability and arc stability and also reduces contact tip wear to a level equal to the very best copper coated wires.



OK AristoRod<sup>™</sup> with Advanced Surface Characteristics (ASC) takes your manual, mechanised or robotic MAG welding

operations to new levels of

performance and all round efficiency. This high efficiency wire will have a positive impact on reducing your overall welding costs.

ESAB's unique ASC has enabled the creation of a family of non-coppercoated wires which do not contaminate wire feeders, liners, torches and contact tips with copper particles. This results in troubleced Surface high strenght, creep resistant and your manual, weather resistant steels.

- Consistent welding
  performance
- Stable arc with low feeding force
- Excellent arc ignition
- High current applicability
- Extremely low overall spatter
- Trouble-free feedability, even at high wire feed speeds and lengthy feed distances
- Low fume emission

free feeding, a high process stability, reduced consumption of wear parts and superior welding properties.

With OK AristoRod<sup>™</sup> you gain a higher productivity, improved weld quality, a cleaner work environment and reduced overall welding costs.

The AristoRod<sup>™</sup> product range consists of wires for normal strength,

OK AristoRod™ wires can be safely stored for extended periods. That's

because the ASC surface technology creates a barrier that is highly resistant to corrosion.

OK AristoRod<sup>™</sup> is available either on adapter-free spools, or Marathon Pac<sup>™</sup> 250 and 475kg octagonal bulk drums. There's even an 'Endless' Marathon Pac<sup>™</sup> version for continuous, non-stop

delivery of wire to the welding torch.

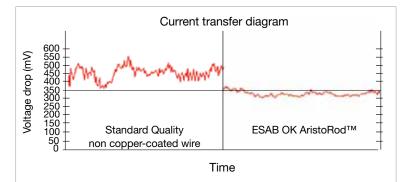
The 'Aristo' name is synonymous with ESAB's highest quality traditions. That is why you can be certain that OK AristoRod<sup>™</sup> with ASC technology will clearly deliver measurable performance and efficiency enhancements across your welding operations.

# MAG welding at new performance levels

### Here's what you'll gain from OK AristoRod™

ESAB OK AristoRod<sup>TM</sup> with Advanced Surface Characteristics has a number of unique features with advantages for manual, mechanised and robotic welding. These translate into clear benefits which, together, add up to increased productivity and lower welding costs. A number of features, listed in the table, are explained on pages 3 and 4 by means of figures and diagrams.

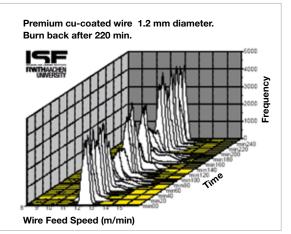
Feature	Benefit
Consistent welding performance,	Consistent weld results
Stable arc with low feeding force	High weld quality. Reduced rework or post weld cleaning
Excellent arc ignition	Reduced post weld cleaning
High current operability	Higher productivity
Extremely low spatter level	Reduced post weld cleaning
Trouble-free feedability, even at high wire feed speeds and	Higher productivity, reduced equipment downtime
long feed distances	
Low fume emission	Cleaner working environment



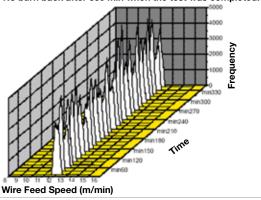
Current transfer from tip to wire for standard quality non copper-coated wire, OK AristoRod<sup>™</sup> and high quality copper-coated wire. ASC brings the current transfer to the level of the high quality copper-coated wire, but with improved current transfer stability.



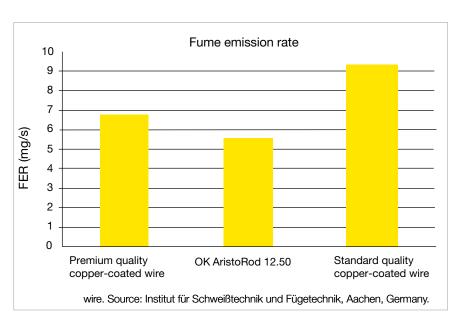
Corrosion resistance to the level of the very best copper-coated wire is another property of ASC technology. Here you see the results after 10 days of exposure to tropical conditions, the most severe combination of high temperature and relative humidity. In Europe, this is rarely reached even in summer.



OK AristoRod welding wire 1.2 mm diameter. No burn back after 330 min when the test was completed.



Wire feed speed variances measured at the torch. 12.5 m/min set on the wire feeder. The vertical axis shows the number of measurements. Source: Institut für Schweißtechnik und Fügetechnik, Aachen, Germany. Parameters used in the test: 350A, 32V, stickout 20mm shielding gas 80%Ar and 20% C0<sub>2</sub>





Welding fumes are hazardous. Always use personal protection.

Fume emission rate according to ISO 15011. The fume emission rate is significantly lower than from standard quality copper-coated wire. Parameters used in the test:

350A  $\,$  , 32V, 20mm s/o ,  $\,$  shielding gas 80% Ar and 20%  $\rm CO_2$ 

## **OK AristoRod™ – the complete range**

#### AWS and EN classifications

Product	Classifica	ation wire	Classif	Classification wire and weld metal		Shielding gas		Steel type	
	AWS		EN-ISO	1		EN-ISC	0 14175		
OK AristoRod <sup>TM</sup>	A5.18	A5.28	14341-A	16834-A	21952-A /-B	M21	C1		
12.50	ER70S-6		G3Si1			G 42 4	G 38 2	Normal strength	
12.57	ER70S-3		G2Si			G 38 3	G 35 2	Normal strength	
12.62	ER70S-2		G2Ti			G 46 4	G 42 3	Normal strength	
12.63	ER70S-6		G4Si1			G 46 4	G 42 2	Normal strength	
12.65	ER70S-6		G4Si1			G 46 4	G 42 2	Normal strength	
13.08		ER80S-D2	G4Mo		G 4Mo / G 1M3	G 50 4	G 46 0	Creep resistant	
13.09		ER80S-G	G2Mo		G MoSi /G 1M3	G 46 2	G 38 0	Creep resistant	
13.12		ER80S-G			G CrMo1Si / G 1CM3			Creep resistant	
13.16		ER80S-B2			G 55A 1CM			Creep resistant	
13.22		ER90S-G			G CrMo2Si			Creep resistant	
13.26		ER80S-G	G0			G 46 4	G 42 0	Weather resistant	
55 (13.13)		ER100S-G		G Mn3NiCrMo		G 55 4		High strength	
69 (13.29)		ER110S-G		G Mn3Ni1CrMo		G 69 4		High strength	
79 (13.31)		ER120S-G		G Mn4Ni2CrMo		G 79 4		High strength	
89 (1B96)		ER120S-G		G Mn4Ni2CrMo		G 89 4		High strength	

#### Approvals

	ABS	BV	CWB	DB	DNV	GL	LR	CE	VdTÛV
OK AristoRod™									
12.50	3YSA	SA3YM	CSAW48	42.039.29	III YMS	3YS	3S 3YS	х	10052
12.57				42.039.10				x	10615
12.63	3YSA	SA3YM	CSAW48	42.039.30	III YMS	3YS	3YS	х	10051
13.08			CSAW48						
13.09				42.039.31	III YMS				10088
13.12									10089
13.26				42.039.32	II/III YMS			х	
69 (13.29)				42.039.33				х	10090
89 (1B96)				42.039.37		4Y89S		х	11881



## Marathon Pac<sup>™</sup> – endless feedability

For many ESAB customers, Marathon Pac<sup>™</sup> is key in maximising production efficiency and quality. In fact, it can cut down time on spool changes and maintenance by almost 95%.

**Bulk supply** Marathon Pac<sup>™</sup>s are available packed with either 250 or 475 kg of welding wire. An 'Endless' version combines the contents of a series of Marathon Pac<sup>™</sup>s to form a continuous in-line supply source. As each drum empties, the subsequent drum takes over and a new drum is added to the line to form an uninterrupted supply.

Perfect delivery to the welding head The special coiling technique used in packing the drum ensures that your OK AristoRod<sup>™</sup> wire is never twisted, kinked, or causes arc wander. Welds are always well positioned and perfectly straight. The feeding process from the Marathon Pac<sup>™</sup> is automatic, so no separate de-coiling equipment is needed and no additional forces are required as with turning a traditional revolving spool.

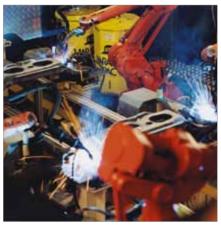
For ease of recycling, Marathon Pac<sup>™</sup> comes in octagonal cardboard drums that can be folded flat after use. The high quality board used will often fetch a price premium in the recycling market.



Perfect delivery to the welding torch. The feeding process from the drum is automatic and requires no additional feed force to pull the wire as is common with a traditional revolving spool.

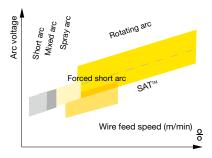


Marathon Pac<sup>™</sup> endless wire delivery system feeds OK AristoRod<sup>™</sup> to the robotic welding head for high volume production.



The high speed, robotised welding of thin sheet automotive components is an important application area for OK AristoRod™ wires.

## World leader in welding and cutting technology and systems.



ESAB Swift Arc Transfer<sup>TM</sup> is a high productivity MAG process that utilises AristoRod<sup>TM</sup> non-copper coated wires at very high wire feed speeds . The SAT process produces flat welds with good penetration and without undercut. ESAB operates at the forefront of welding and cutting technology. Over one hundred years of continuous improvement in products and processes enables us to meet the challenges of technological advance in every sector in which ESAB operates.

#### Quality and environment standards

Quality, the environment and safety are three key areas of focus. ESAB is one of few international companies to have achieved the ISO 14001 and OHSAS 18001 standards in Environmental, Health & Safety Management Systems across all our global manufacturing facilities. At ESAB, quality is an ongoing process that is at the heart of all our production processes and facilities worldwide.

Multinational manufacturing, local representation and an international network of independent distributors brings the benefits of ESAB quality and unrivalled expertise in materials and processes within reach of all our customers, wherever they are located.



ESAB Sales and Support Offices worldwide



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