


<b>Technical data sheet</b>  <small>011121MBA</small>	<b>Coated SMAW Electrode</b>  <b>WA HARDFACE AR-E</b>	 <b>Welding Alloys</b>
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### CLASSIFICATION

EN 14700: E Fe4

### DESCRIPTION

- Rutile-basic coated electrode
- Hard martensitic high-speed steel deposit with a high proportion of mixed carbides
- Exceptional edge retention and resistance to metal-metal wear under moderate impacts
- Withstands service temperatures up to 500°C
- Machinable only by grinding as-welded, but may be softened for machining and re-hardened by quenching

### APPLICATIONS

Machining tools, cutting and shearing tools, punches and drills.

### TYPICAL ALL-WELD METAL ANALYSIS [%]

C	Si	Mn	Cr	Mo	W	V	Fe
0.8	0.5	0.5	5.0	10	1.5	1.5	Bal.

### TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES

Hardness as welded: 60 – 63 HRc undiluted

### OPERATING CONDITIONS

Electrode Ø x L [mm]	2.5 x 350	3.2 x 350	4.0 x 450
Current [A]	80	110	150
= +	~ 50V		

Re-drying, if necessary, at 250°C for 1 hour. Preheating is not required on mild and medium carbon steels. Low alloyed, high carbon tool steels etc. need to be preheated to 250 - 400°C, depending on their composition and thickness. Maintain the temperature during welding. Cool slowly in still air after surfacing. Softening: anneal at 850°C for 2 hours, followed by slow cooling (around 3°C/min)

Re-hardening: hold at 1200°C for 1 hour, then quench in oil or by using compressed air. Anneal twice at 500°C for 1 hour, if desired.

### WELDING POSITIONS

EN ISO 6947: PA, PC, PF, PE

ASME IX: 1G, 2G, 3G, 4G

### PACKAGING

Electrode Ø x L [mm]	2.5 x 350	3.2 x 350	4.0 x 450
Weight/box [kg]	5	5	6.5

Other packaging and other sizes: please consult us