

<b>Technical data sheet</b>  <small>011121MBA</small>	<b>Cored welding wire</b>  <b>ROBODUR K 650-G</b>	 <b>Welding Alloys</b>
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### CLASSIFICATION

EN 14700: T Fe8

### DESCRIPTION

- Seamless high fill copper coated tubular wire for semi-automatic gas shielded hardfacing
- Unique welder appeal
- Deposition rate increased by up to 20% when compared to solid wire
- Martensitic weld metal contains finely dispersed hard carbides ensuring an optimal balance between abrasion, friction and impact resistance
- Wire does not pick up moisture, the wire feeding properties are excellent
- Designed for welding in horizontal, horizontal-vertical and vertical-up positions
- Abrasion resistance is maintained at service temperatures up to 500°C

### APPLICATIONS

ROBODUR K 650-G is used for hardfacing components that must combine resistance both to abrasion and to moderate impact

**Examples:** Bucket teeth, bucket lips, bulldozer blades, crusher jaws, scraper blades, chutes, pump housings, conveyor screws, slide plates, gear teeth, crusher hammers, drilling bits, ploughshares, dies, impact drills etc.

### TYPICAL ALL-WELD METAL ANALYSIS

C	Mn	Si	Cr	Mo	W	V
0.5	1.3	1.3	5.6	1.3	1.3	0.3

Microstructure: martensite

### TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES

Hardness as welded, 3-layer deposit on mild steel: 57 – 62 HRc

### CONDITIONS OF USE

Current type	Shielding gas
DC-, DC+ or pulsed	M12: Ar + 0.5 – 5 % CO <sub>2</sub>
	M13: Ar + 0.5 - 3% O <sub>2</sub>
	M20: Ar + 5 – 15 % CO <sub>2</sub>
	M21: Ar + 15 – 25 % CO <sub>2</sub>

### OPERATING CONDITIONS

Diameter [mm]	Current [A]	Voltage [V]	Stick-out	Gas flow rate
1.2	110 - 300	16 - 32	12 - 25 mm	10 - 20 l/min.
1.6	130 - 350	16 - 32	12 - 25 mm	10 - 20 l/min.

Recovery: 98 %

Reverse polarity (DC-) reduces dilution and favours higher hardness.

Preheat will be determined by the application and whether micro cracking in the deposit is acceptable. According to the base material preheating in the range 150°C - 300°C may be necessary.

A tough and malleable buffer layer of TETRA S 312-G is recommended when hardfacing on 13% Mn austenitic steels or air hardenable steels.

### WELDING POSITIONS

ROBODUR K 650-G is suitable both for downhand and for positional welding by adapting transfer mode and welding parameters as for solid wires.

### PACKAGING

Diameter	1.2 mm	1.6 mm
	EN ISO 544 – ASME II C SFA-5.2 M	
Spool type	BS300	
Weight	15 kg	

Other packaging and other diameters: please consult us

Welding products and techniques evolve constantly. All descriptions, illustrations and properties given in this data sheet are subject to change without notice and can only be considered as suitable for general guidance. This document is intended to help the user make the correct choice of product. It is his responsibility to assess its suitability for his intended application.