

## MIG/MAG solid wires-TIG rods C-Mn and low-alloy steels

CARBOFIL KV3 is a copper coated ER90S-B3 type solid MAG welding wire supplied precision layer wound, depositing a 2¼Cr1Mo weld metal for the welding of creep resistant steels. Ar-CO2 mix shielding gases are preferred for improved mechanical properties.

CARBOFIL KV3 is used for welding of similar composition and ½Mo¼V and 1%Cr1Mo steels. Used in the construction of steam generating plant operating at temperatures <600°C. Also suitable for the welding of 1¼Cr 1Mo steels where improved resistance to hydrogen attack or corrosion by sulphur is required. Main applications are welding of boilers, plates and tubes as well as oil refineries e.g. in crack plants produced from mainly 10CrMo9-10 (ASTM A335 Gr. P/T22).

CARBOFIL KV3 is a very clean welding wire with guaranteed X<15 Bruscato factor, and with controlled As, Sb, Sn content against temper embrittlement. CARBOFIL KV3 is used, where the operational guidelines are given by the ASME norms.

### Classification

EN ISO	21952-B: G 62M 2C1M
AWS	A5.28: ER 90S-B3

### Chemical analysis (Typical values in %)

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Wire	0.07-0.12	0.4-0.7	0.4-0.7	max. 0.01	max. 0.01	2.3-2.7	max. 0.2	0.9-1.2	max. 0.2

### All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)
				+20 °C
620°C x 1h	≥540	≥620	≥20	≥70

Gas test: M21-Arcal 21

**Shielding Gas** - EN ISO 14175 : C1-Arcal, M21-Arcal 21

### Materials

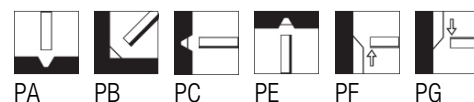
10CrMo 9-10, 12CrMo 9-10

### Storage

Keep dry and avoid condensation

### Current condition and welding position

DC+



### Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.0	●
1.2	●