

CARBOFIL CrMo91 is a copper coated GCrMo91/ER90S-B9 type solid MAG welding wire supplied precision layer wound, for welding creep resisting steels of the type 9Cr1MoVNbN. Ar-CO2 mix shielding gases preferred for improved mechanical properties.

CARBOFIL CrMo91 is especially designed for the ASTM steels T91/P91. Approved in long-term condition  $<+650^{\circ}\text{C}$  service temperature.

Improved creep strength is obtained by the addition of nitrogen, niobium and vanadium.

### Classification

|        |                     |
|--------|---------------------|
| EN ISO | 21952-A: G CrMo91   |
| AWS    | A5.28-05: ER 90S-B9 |

### Chemical analysis (Typical values in %)

| C    | Mn  | Si   | Cr  | Ni   | Mo   | Nb   | V    |
|------|-----|------|-----|------|------|------|------|
| 0.09 | 0.5 | 0.22 | 8.5 | 0.65 | 0.91 | 0.08 | 0.19 |

### All-weld metal Mechanical Properties

| Heat Treatment | Yield Strength (MPa) | Tensile Strength (MPa) | Elongation A5 (%) | Impact Energy ISO - V (J) |
|----------------|----------------------|------------------------|-------------------|---------------------------|
|                |                      |                        |                   | +20 °C                    |
| 760°C x 2h     | $\geq 620$           | $\geq 720$             | $\geq 19$         | $\geq 50$                 |

Gas test: 97.5%Ar + 2.5%CO2

### Shielding Gas - EN ISO 14175 : M12

### Materials

ASTM: A 213 T91; A 335 P91; A 387 Gr 91; A 182 F91; A336 F91

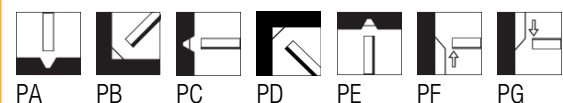
EN 10028-2: X10CrMoVNb9-1; 1.4903

### 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                   | ●    |