

CARBO SK 25

Standards DIN 8555 E 20-UM-300-CKTZ

Approvals ---

Characteristics CARBO SK 25 is a rutile coated electrode which is AC weldable. The deposit is a cobalt base alloy with about 10 % Ni for matrix stability during elevated temperature service. The weld metal is highly resistant to hot corrosion, impact wear and extreme temperature shocks and oxidation. The alloy is machinable by hard faced tools.

Typical application Hot forging tools, aerospace industry, turbo charger buckets, parts subject to high operation temperatures in combination with all types of wear such as impact, pressure, corrosion, erosion etc. The alloy is used on gas turbine components, on steam and chemical valves, on equipments handling hot steel such as tong bits, share blades, pumps for high temperature liquids.

Operating temperature Room temperature up to 900 °C

Welding recommendation Preheating temperature should be chosen depending on base material and construction. For low alloyed steels and austenitic material a slow cooling rate is advisable.

| Mechanical properties of all-weld metal (typical values) | Melting-range | Density g/cm ³ | Elongation % | | Tensile strength N/mm ² | |
|--|---------------|---------------------------|--------------|-------|------------------------------------|-------|
| | | | 20°C | 800°C | 20°C | 800°C |
| | 1280-1390°C | 8,3 | 5,5 | 13 | 630 | 300 |

| Hardness of all-weld metal (typical values) | At Rt. | + 900°C | work hardened |
|---|---------|---------|---------------|
| | HB | HB | HRc |
| | ca. 285 | ca. 140 | ca. 45 |

| Weld metal analysis (typical, wt. %) | C | Si | Mn | Cr | Ni | W | Co | Fe |
|--------------------------------------|-------|-----|----|----|----|----|------|-----|
| | < 0,1 | 0,8 | 1 | 20 | 10 | 15 | Base | < 3 |

Current = + / ~ 42 V

Welding positions PA, PB, PC

Rebaking 1 h, 350 +/- 10 °C (if required)

Flux-cored wire equivalent CARBO F- 25

| Dia./Length | Amperage (A) | Pcs./packet | Pcs./carton | kg/1000 | kg/packet | kg/carton |
|-------------|--------------|-------------|-------------|---------|-----------|-----------|
| 3,2 x 350 | 70 - 110 | 140 | 560 | 35,7 | 5,0 | 20,0 |
| 4,0 x 350 | 100 - 140 | 103 | 412 | 48,6 | 5,0 | 20,0 |
| 5,0 x 350 | 140 - 180 | 64 | 254 | 78,7 | 5,0 | 20,0 |

Rev. 000

Statements on composition and application are just for the applier's information. Statements on mechanical properties always refer to the all-weld-metal according to valid standards. Carbo-Weld may change the characteristics of its products without notice. We recommend the applier to check our products for their special application autonomously.