

# CARBO SK 25

**Standards**

DIN 8555	E 20-UM-300-CKTZ
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**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 <sup>3</sup>	Elongation %		Tensile strength N/mm <sup>2</sup>	
		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. HB	+ 900°C HB	work hardened 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
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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