

# CARBO S 25

**Standards** DIN 8555 E 20-UM-300-CKTZ

**Approvals** ---

**Characteristics** CARBO S 25 is an AC weldable rutile coated electrode with a recovery of 160 %. 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.	+ 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	5	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	90 - 130	84	336	59,5	5,0	20,0
4,0 x 350	120 - 170	62	247	81,0	5,0	20,0
5,0 x 350	150 - 200	38	152	131,2	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.