

CARBOLLOY C

International standards	Material No.	2.4883
	AWS A5.11	E NiCrMo-5
	DIN 8555	E 23-UM-250-CKNPTZ

Approvals ---

Typical applications and characteristics High alloyed nickel based AC electrode with 160 % recovery. The CARBOLLOY C type deposit has outstanding physical characteristics and is resistant to both, oxidation and reduction corrosion. It work hardens under impact and by machining to ca.400 HB – even at high temperatures – without deforming the deposit. Thick layers should be buffered with CARBO 29/9. CARBOLLOY C is used in general for surfacing of all work-pieces subject to mechanical stress combined with corrosion and/or to high temperatures (from 400 – 750°C)

Operating temperature Room temperature up to 400° C

Base materials Main applications: Surfacing of hot working tools as hot forging dies, hot shear blades, punches, swages, dies, press tools, milling rolls and valves, etc.

Welding instructions To achieve a crack-free overlay, the base material should be preheated to 300 – 400°C, depending on the alloy.

Mechanical properties of all-weld metal	Tensile strength	Yield strength	Elongation	Hardness (HB)	
	R_m N/mm²	R_{p0,2} N/mm²	A₅ %	as welded / work-hardened	
(typical values)	680	500	> 10	ca. 220	ca. 400

Weld metal analysis	C	Cr	Mo	W	Fe	Ni
(typical, wt. %)	0,06	15	16	4,0	5	Bal.

Current = + / ~ 50 V

Welding positions PA, PB, PC, PD, PE, PF

Rebaking 1 h, 300 °C +/- 10 °C (if required)

Flux-cored wire equivalent CARBOLLOY F-C

Dia./Length	Amperage (A)	Pcs./ packet	Pcs./ carton	kg / 1000	kg / packet	kg / carton
2,5 x 350	60 - 90	178	712	28,1	5,0	20,0
3,2 x 350	90 - 120	105	421	47,5	5,0	20,0
4,0 x 350	110 - 150	70	278	71,9	5,0	20,0
5,0 x 450	130 - 180	42	166	144,5	6,0	24,0