

# CARBOLLOY Co

<b>International standards</b>	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 Co 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 Co 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.

<b>Mechanical properties of all-weld metal</b>	<b>Tensile strength</b>	<b>Yield strength</b>	<b>Elongation</b>	<b>Hardness (HB)</b>	
	<b>R<sub>m</sub> N/mm<sup>2</sup></b>	<b>R<sub>p0,2</sub> N/mm<sup>2</sup></b>	<b>A<sub>5</sub> %</b>	<b>as welded / work-hardened</b>	
( typical values)	680	500	> 10	ca. 220	ca. 400

<b>Weld metal analysis</b>	<b>C</b>	<b>Cr</b>	<b>Co</b>	<b>Mo</b>	<b>W</b>	<b>Fe</b>	<b>Ni</b>
(typical, wt. %)	0,06	15	2	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-CO

<b>Dia./Length</b>	<b>Amperage (A)</b>	<b>Pcs./ packet</b>	<b>Pcs./ carton</b>	<b>kg / 1000</b>	<b>kg / packet</b>	<b>kg / carton</b>
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