

**B94** AC/DC±**NICKEL ALLOY****DESCRIPTION**

**Basic coated Ni-Cr-Fe electrode for alternative current.** Basic coated electrode with 150 % recovery, for welding Nickel-Chromium-Iron alloys to themselves and to lower alloyed steels as well as for welding cryogenic 5 and 9 % Ni-steels and high temperature steels, for CrMo-creep resistant steels to stainless steels, for repair on HK and HP reformer grades. The electrode is especially designed to weld with alternative current.

**CLASSIFICATION**

AWS A5.11 : ENiCrFe-2      UNS : W86133      EN/ISO 14172: E-Ni6092 (NiCr16Fe12NbMo)  
DIN 1736 : EL-NiCr 15 FeNb

**BASE MATERIALS:** 5%Ni, 9%Ni, 600, 800, 800H, HK40, HP30

**PROCEDURE**

Rebaking (1 h at 250-300°C) (482 - 572°F). Joints to weld must be clean, exempt from grease, cracks. Guide electrodes with a slight declination, weld with a short arc and prevent a high heat input by applying the stringer bead technique (weaving max. 2-3 times core wire diam.) For repair welding a preheating, depending on the carbon equivalent of the base material, in the range of 100-250°C (212 - 482°F), is recommended.

**MECHANICAL PROPERTIES**

Tensile strength: > 90 000 psi (> 620 MPa)  
Yield strength: > 55 000 psi (> 380 MPa)  
Elongation: > 30 %  
Impact (Charpy V): > 80 J at +20°C, > 60 J at -196°C

**TYPICAL WELD METAL COMPOSITION (%)**

C	Si	Mn	Cr	Nb	Fe	Mo	Ni
0.06	0.5	2.8	16.0	1.7	7.0	1.8	Base

**WELDING PARAMETERS**

Diameter:            4.0 mm (5/32")            3.2 mm (1/8")            2.5 mm (3/32")  
Amperage:            120 -140 A            90 - 120 A            70 - 90 A

**WELDING POSITIONS**

1G/PA    2F/PB    2G/PC    3G/PF    4G/PE

TIG rods are also available: **Selectarc TIG B94** (AWS A5.14: ERNiCrFe-6)

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*Specialized welding alloys and technology. For technical assistance or for ordering:*