


B91 AC/DC+

NICKEL ALLOY
DESCRIPTION

High recovery and high corrosion resistant NiCrMo electrode. Rutile-basic coated electrode with a high recovery (170 %) for welding of Nickel-Chromium-Molybdenum alloys to themselves and to lower alloyed steels as well as for welding of special austenitic stainless steels. Often used for butt-welding and surfacing on low alloyed and high strength steels as well as for dissimilar joints, buffer layers and for difficult to weld steels. Deposit type alloy 625. Crack resistant buffer layers on machine parts in earth movement and steel industries subject to impact and pressure.

CLASSIFICATION

AWS A5.11 : ENiCrMo-3 UNS : W86112 EN/ISO 14172: E-Ni6625 (NiCr22Mo9Nb)

BASE MATERIALS : 9% Ni, 625, 825, 904L, 254SMo

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 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: > 110 000 psi (> 760 MPa)
 Yield strength: > 65 000 psi (> 450 MPa)
 Elongation: > 30 %
 Hardness: ~ 240 HB

TYPICAL WELD METAL COMPOSITION (%)

C	Si	Mn	Cr	Nb	Fe	Mo	Ni
0.04	0.6	0.8	21.0	3.3	4.0	8.5	Rem

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

TIG rods are also available: **Selectarc TIG B91** (AWS A5.14: ERNiCrMo-3)

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