

**NiTi3**

DC+

**NICKEL ALLOY****DESCRIPTION**

**Pure nickel electrode.** Basic coated electrode with a Nickel deposit containing 1 - 2% Ti designated for butt welding of pure Nickel (alloy 200) and surfacing of Nickel-copper, Copper-Nickel and Copper-Nickel plated steels. Also recommended for dissimilar joining like steels / Nickel-Copper or steel / Copper / Copper-Nickel. Excellent resistance to NaOH up to 400°C (752°F).

**CLASSIFICATION**

AWS A5.11 : ENi-1    UNS : W82141    DIN 1736 : EL-NiTi3    EN/ISO 14172 : E-Ni2061 (NiTi3)

**TYPICAL APPLICATIONS**

Construction of equipment for the chemical industry and petrochemical industry, food stuff industry. For caustic soda production as well as for soap and detergents.

**BASE MATERIALS:** 200, 201, 205

**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 (10-20° inclined in direction of travel), weld with a short arc and apply the stringer bead technique (weaving max. 2 times core wire diam.). To improve degassing of the deposit, adopt a low welding speed.

**MECHANICAL PROPERTIES**

Tensile strength:        > 61 000 psi (> 420 MPa)  
 Yield strength:        > 40 500 psi (> 280 MPa)  
 Elongation:            > 28 %  
 Impact (Charpy V):    > 160 J at +20°C, > 160 J at -196°C

**TYPICAL WELD METAL COMPOSITION (%)**

C	Si	Mn	Fe	Ti	Al	Ni
< 0.03	0.7	0.3	0.3	1.6	0.3	Rem

**WELDING PARAMETERS**

Diameter:	4.0 mm (5/32")	3.2 mm (1/8")	2.5 mm (3/32")
Amperage:	120 - 160 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 NiTi3** (AWS A5.14: ERNi-1)

Rev.: 21\_08

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