# OK 61.80

## A niobium stabilised stainless steel electrode of the 19/9 type

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Classification AWS A5.4: E 347-16
IS 5206: E 19.9 Nb R 26

**DESCRIPTION**

OK 61.80 is a rutile type low carbon 19/10 Nb stabilised stainless steel electrode with controlled ferrite in the range 5-9. This provide excellent resistance to scaling, corrosion and cracking at temperatures of upto 800°C. Niobium prevents harmful carbide precipitation to avoid intergranular cracking in the temperature range 425°C to 850°C. The weldability of OK 61.80 is outstanding with very easy striking and restriking properties. The slag system is designed to provide self-lifting slag, and a bead that is smoothly rippled and shiny. Weldmetal is of radiographic quality.

**APPROVALS :** NPC

**WELDING CURRENT:** DC+, AC 50V

**TYPICAL APPLICATIONS**

OK 61.80 finds extensive application in welding of stabilised version of 19/10 type steels corresponding to AISI 321 & 347, Werkstoff Nr: 1.4541, 1.4543, 1.4550, 1.4552. These steels are used widely in the food and beverage industries, chemical industries, petrochemical industries, power plants, aircraft industries, etc.

**TYPICAL ALL WELDMETAL PROPERTIES**

| Chemical Composition (%) | | | | Mechanical Properties | |
|---|---|---|---|---|---|
| C | 0.05 | Ni | 10.00 | UTS | 600 N/mm$^2$ |
| Mn | 0.90 | Si | 0.70 | YS | 400 N/mm$^2$ |
| Cr | 19.50 | Nb | 0.60 | EL (L=4d) | 35% |
| S | 0.015 | P | 0.02 | Ferrite | 5-9 FN |

**CURRENT RANGE & PACKING DATA**

| Size (mm) | Length (mm) | Current Range (Amps) | No. of Electrodes in a | |
|---|---|---|---|---|
| | | | Carton | Cardboard box |
| 2.50 | 350 | 60-90 | 80 | 400 |
| 3.15 | 350 | 80-120 | 60 | 300 |
| 4.00 | 350 | 120-170 | 40 | 200 |
| 5.00 | 350 | 150-240 | 25 | 125 |

PACKING: Electrodes are packed in heat sealed plastic cartons and five of these cartons are shrink wrapped in a cardboard box.