

Welding nickel alloys and dissimilar metals

GENERAL DESCRIPTION

Special high nickel base electrode for crack-free, welding of Inconel®, Incoloy®, Nimonic®, Monel® and Hastelloy® alloys, as well as high alloyed stainless-steel, heat-resistant steel and ferritic steel. The alloy is also used for making dissimilar welds between nickel alloys and steel, stainless steel and copper alloys and between steel and copper alloys. The excellent mechanical characteristics at low temperatures make the alloy suitable for welding nickel-steels (9%Ni) for use at subzero temperatures (down to -196 °C). Deposits have superior corrosion resistance and are resistant to temperatures up to 1100 °C in sulphur free atmospheres. Excellent welding properties: a stable arc even at low amperage, very easy slag removal and excellent weldability on alternating current.

APPLICATIONS

Furnaces and heat resistant parts, where thermal shocks occur, installations for liquefied gas.
Joining stainless to mild steel, welding crack sensitive steel types even with heavy sections.
Cushion layers for hard facings on problem steels.

CHEMICAL COMPOSITION (%) (Typical values, all weld metal)

C : 0.04	Cr : 16.50	Mn : 6.00	Ta : 1.30	Nb : 2.00
Fe : 6.00	Ni : Balance			

MECHANICAL PROPERTIES (Typical values, all weld metal)

Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation 5d (%)	Impact Strength Charpy V notch (ISO-V)
≥ 420 MPa	≥ 620 MPa	≥ 36 %	≥ 110 J (20°C) / ≥ 100 J (-196°C)

GENERAL INFORMATION

Welding positions	All, except vertical down		
Shielding gas	NA		
Packing	5 Kg in a plastic box		
Polarity	Ac or DC, reverse polarity (electrode positive)		
Diameter (mm)	2.5	3.2	4.0
Length (mm)	300	300	350
Approx. current (A)	70 - 80	90 - 100	115 - 130

Tips & Tricks Clean the pieces thoroughly, remove oil and grease.
Use stringer beads (do not weave).
The electrodes should be used dry.

The information in this document is based on intensive tests and is accurate to the best of our knowledge. Do note that these values are only typical values for tests in accordance to prescribed standards. The suitability of the product should always be confirmed by qualification tests before use in any application. The information can be changed without previous notice.