# CEWELD NiCrMo 686 CPT Tig

certilas® THE FILLER METAL SPECIALIST

**TYPE**

Nickel-Chromium-Molybdenum based alloy for Tig welding

**APPLICATIONS**

NICrMo 686 is of great value for service environments requiring general corrosion-resistance in HCl or sulfuric acid; for resistance to crevice corrosion in hot, concentrated acid chloride solutions such as sulfur dioxide saturated NaCl solutions and oxidizing chloride solutions; and for resistance to intergranular attack, and for resistance to intergranular attack, after sensitization, in highly oxidizing environments.

**PROPERTIES**

NiCrMo 686 (UNS N06686/W.Nr. 2.4606) is a single-phase, austenitic Ni-Cr-Mo-W alloy offering outstanding corrosion-resistance in a range of severe environments. Its high nickel (Ni) and molybdenum (Mo) provide good resistance in reducing conditions, and high chromium (Cr) offers resistance to oxidizing media. Molybdenum (Mo) and tungsten (W) aid resistance to localized corrosion such as pitting. Iron (Fe) is closely controlled to enhance properties. Low carbon (C) helps minimize grain boundary precipitation to maintain corrosion-resistance in the heat-affected zones of welded joints. Resistance to general, pitting and crevice corrosion increases with the alloying (Cr+Mo+W) content, and NiCrMo 686 scores higher than competitive materials.

**CLASSIFICATION**

| | |
|---|---|
| AWS | A 5.14: ERNiCrMo-14 |
| EN ISO | 18274: S Ni 6686 (NiCr21Mo16W4) |
| W.Nr. | ~2.4606 |
| F-nr | 43 |
| FM | 6 |

**SUITABLE FOR**

**ENiCrMo-14, E Ni 6686 NiCr21Mo16W4**
2.4602, 2.4605, 2.4607, 2.4610, 2.4819, 2.4656, 1.4529,1.4547, 1.4565
NiCr23Mo16, NICr23Mo16Al, NiMo16Cr15Ti, NiMo16Cr16Ti, NiCr21Mo14W, NiMo16Cr15W, NiCr22Mo9Nb, Alloy 59, Alloy C4, Alloy 276, X1NiCrMoCuN25-20-7, X1CrNiMoCuN20-18-7
**ASTM:** C-4, C-276, C-22, 625, 904hMo
**UNS:** N06059, N06455, N10276, N06022, N06625, N08925, S31254
Duplex, Superduplex, super austenitic stainless steel, Nickel Alloys, N06059, N06022, Hastelloy C276, Alloy C22, Inconel 622, 625, 686, Outokumpu 654 SMO,

**APPROVALS**

**WELDING POSITIONS**


**TYPICAL CHEMICAL ANALYSIS OF THE FILLER METAL (%)**

| C | Si | Mn | P | S | Cr | Ni | Mo | Ti | Fe | W | Cu | Al |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.006 | 0.03 | 0.25 | 0.004 | 0.001 | 20 | 58 | 16 | 0.06 | 0.27 | 4 | 0.002 | 0.3 |

**MECHANICAL PROPERTIES**

| Heat Treatment | $R_{P0,2}$ (MPa) | Rm (MPa) | A5 (%) | Hardness |
|---|---|---|---|---|
| As Welded | | 760 | | HRc |

**REDRYING**

Not required

**GAS ACC. EN ISO 14175**

I1

# CEWELD NiCrMo 686 CPT Tig

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NICRMO 686 CPT TIG 1,6 X 1000MM

| Packaging | KG/unit | EanCode |
|---|---|---|
| Tube | 4,54 | 8720663419415 |

NICRMO 686 CPT TIG 2,0 X 1000MM

| Packaging | KG/unit | EanCode |
|---|---|---|
| Tube | 5 | 8720663419422 |

NICRMO 686 CPT TIG 2,4 X1000MM

| Packaging | KG/unit | EanCode |
|---|---|---|
| Tube | 5 | 8720663419439 |

NICRMO 686 CPT TIG 3,2 X 1000MM

| Packaging | KG/unit | EanCode |
|---|---|---|
| Tube | 4,54 | 8720663419446 |