

Ni-Cr-Mo Filler Metal  
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**INCO-WELD® 686CPT® Filler Metal**

**INCO-WELD 686CPT Filler Metal** is used for gas-tungsten-arc and gas-metal-arc welding of duplex, super-duplex and super-austenitic stainless steels, as well as nickel alloys such as UNS N06059 and N06022, INCONEL alloy C-276, and INCONEL alloys 22, 625, and 686. It is also capable of being used to deposit overlays of outstanding corrosion-resistance onto a range of steels. The high alloy levels (of Cr + Mo + W) result in increased resistance to pitting, crevice and general corrosion. INCO-WELD 686CPT Filler Metal 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, after sensitization, in highly oxidizing environments.

**Specifications**

AWS A.5.14 ERNiCrMo-14 (UNS N06686)  
ASME II, Part C, SFA-5.14, ERNiCrMo-14 (UNS N06686)  
ASME IX, F-No.43  
\*(EN) ISO 1827 4 - SNi6686 (NiCr21Mo16W4)  
\*Supply to these specifications available upon request  
For manufacture to ASME III (NCA3800, NB2400), and other specifications please refer your inquiry to the Technical Department prior to order placement.

**Approvals**

VdTUV 06808.00; 06809.00  
Other approvals may be applicable. Please confirm details of current scope of approvals with the Technical Department prior to order placement.

Limiting Chemical Composition	Ni+Co ..... Remainder		Cu ..... 0.5 max.
	C ..... 0.01 max.		Si ..... 0.08 max.
Mn ..... 1.0 max.		Ti ..... 0.25 max.	
Fe ..... 5.0 max.		Cr ..... 19.0-23.0	
P ..... 0.02 max.		Mo ..... 15.0-17.0	
S ..... 0.02 max.		W ..... 3.0-4.4	
Al ..... 0.5 max.		Others ..... 0.50 max.	

Typical Mechanical Properties	Tensile Strength, psi	110,000
	MPa	758
Elongation, (4d) %	35	

Filler metals available on spool and in cut straight lengths in a variety of sizes selected from the following diameters:

**Available Product Forms**

mm in	0.8 0.030	0.9 0.035	1.0 0.040	1.14 0.045	1.2 0.047	1.6 0.062	2.4 0.093	3.2 0.125
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Straight Lengths - 915 mm (36 in.) or 1000 mm (39 in.)

Rod Diam.	4.54 kg Tube
2.4mm	SMT686CPT24
3.2mm	SMT686CPT32

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