

## MONEL® Welding Electrode 190



**MONEL Welding Electrode 190** is used for shielded-metal-arc welding of MONEL alloys 400, R-405, and K-500. It is also used for surfacing of steel. The weld metal is resistant to corrosion by sea water, salts, and reducing acids. The electrode is capable of producing weld deposits that meet stringent radiographic requirements. Although the electrode produces sound joints in MONEL alloy K-500, the weld metal has lower strength since, unlike the base metal, it is not age hardenable. Dissimilar-welding applications for MONEL Welding Electrode 190 include joints between MONEL nickel-copper alloys and carbon steel, low-alloy carbon steel, copper, and copper-nickel alloys.

The electrodes provide excellent operability for groove and fillet welding in the downhand position and the smaller diameter electrodes are also suitable for all position welding. Power supply: direct current, electrode positive.

### Specifications

AWS A5.11 ENiCu-7 (UNS W84190)  
 ASME II, Part C, SFA-5.11, ENiCu-7 (UNS W84190)  
 ASME IX, F-No.42  
 \*DIN 1736 EL-NiCu30Mn (2.4366)  
 \*(EN) ISO 14172 – ENi4060 (NiCu30Mn3Ti)  
 \*Supply to these specifications available upon request  
 For manufacture to ASME III (NCA-3800, NB-2400), MIL and other specifications please refer your inquiry to the Technical Department prior to order placement.

### Approvals

VdTUV 2106.01  
 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.....	62.0-69.0	Cu.....	Remainder
C.....	0.15 max.	Al.....	0.75 max.
Mn.....	4.0 max.	Ti.....	1.0 max.
Fe.....	2.5 max.	P.....	0.02 max.
S.....	0.015 max.	Others.....	0.50 max.
Si.....	1.0 max.		

### Typical Mechanical Properties

Tensile Strength, psi	70,000
MPa	480
Elongation, (4d) %	30

### Available Product Forms – Supplied in 10lbs (4.54kg) hermetically sealed containers

Diameter	mm in	2.4 3/32	3.2 1/8	4.0 5/32	4.8 3/16
Length	mm in	305 12	356 14	356 14	356 14
Current (DC+)	A	55-75	75-110	110-150	150-190