



# Tech-Rod 117

Description: Tech-Rod 117 is a covered electrode which is used for welding of nickel-chromium-cobalt-molybdenum alloys (UNS Number N06617). This electrode can also be used for overlay cladding where similar composition is required. The deposited weld metal provides optimum strength and oxidation resistance above 1500°F and up to 2100°F, especially when welding on base metals of nickel-iron-chromium alloys.

## Specifications & Approvals:

AWS A5.11:2010 ENiCrCoMo-1

UNS W86117

ASME QSC-395

## Typical Chemical Composition

C	Mn	Si	Fe	Cr	Mo	Ni	Nb	W	S	P	Ti	Al	Co
.07	.6	.2	1	24.5	8.8	Rem	.1		.005	.012			11.8

## Typical Mechanical Properties

Tensile Strength	110,000 PSI	760 MPa
Yield Strength	87,000 PSI	600 MPa
Elongation	28%	

## Welding Parameters

Process	Diameter x Length	Voltage	Amperage	
			Flat	Vertical & Overhead
SMAW	3/32" (2.4mm) x 12" (305mm)	24-28	70-85	65-75
	1/8" (3.2mm) x 14" (355mm)	26-30	85-110	80-90
	5/32" (4.0mm) x 14" (355mm)	28-32	110-140	100-120
	3/16" (4.8mm) x 14" (355mm)	28-32	120-160	110-130

## Standard Packages:

3/32" Diameter	8 Lb (3.6Kg) Can	24 Lb (10.9Kg) Master Carton	26 Electrodes per Lb
1/8" Diameter	10 Lb (4.5Kg) Can	30 Lb (13.6Kg) Master Carton	14 Electrodes per Lb
5/32" Diameter	10 Lb (4.5Kg) Can	30 Lb (13.6Kg) Master Carton	9 Electrodes per Lb
3/16" Diameter	10 Lb (4.5Kg) Can	30 Lb (13.6Kg) Master Carton	6 Electrodes per Lb