



# Tech-Rod 309

## Description

Tech-Rod 309 electrodes are used for the welding of similar alloys in wrought and cast form, as well as for dissimilar metals such as stainless steels to carbon or low alloy steels. They also can be used for a barrier layer before cladding. Welding of types 405 and 430 can be accomplished without preheat, while types 410, 442, and 446 may call for preheating of a minimum of 300°F (150°C).

## Specifications & Approvals

AWS A5.4 E309-16

UNS W30910

ISO 3581:2003 (22 12)

CWB

ASME QSC-395

## Typical Chemical Composition

C	Mn	Si	Fe	Cr	Mo	Ni	Nb	N	S	P	Cu	FN
.08	1.7	.52	BAL	23.5		12.3		.05	.021	.024		8

\* Nitrogen in these weld deposits is usually between .04% and .08%

## Typical Mechanical Properties

Tensile Strength	87,500 PSI	600 MPA
Yield Strength	59,500 PSI	400 MPA
Elongation	35%	

## 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