



# Techalloy 312

## Description

Techalloy 312 is used to weld cast alloys of similar composition and is used to weld dissimilar metals and weld overlays. This gives very high ferrite. When welding similar cast alloys, limit welding to two or three layers only.

## Specifications & Approvals:

AWS A5.9 ER312

UNS S31380

ISO 14343:2009 (29 9)

CWB

## Typical Chemical Composition

C	Mn	Si	Cr	Mo	Ni	Nb	N	S	P	Cu	FN (WRC)
.11	1.64	.44	29.60		8.90			.012	.017		30 min

## Typical Mechanical Properties

Tensile Strength	109,500 PSI	760 MPA
Yield Strength	78,500 PSI	540 MPA
Elongation	45%	

## Welding Parameters

	Shielding	Gas Flow	Diameter	Voltage	Amperage
Mig Welding	98/99% Argon + 2/1% Oxygen 97% Argon + 3% CO2	30 to 50 CFH	.035" (0.9mm)	26 to 29	160/210
			.045" (1.14mm)	28 TO 32	180/250
			.062" (1.6mm))	29 TO 33	200/280
Tig Welding	100% Argon				
Sub Arc Welding	Suitable flux may be used		3/32" (2.5mm)	28 to 33	275/350
			1/8" (3.14mm)	29 TO 32	350/450
			5/32" (4.0mm)	30 TO 33	400/550

## Standard Packages:

Mig Wire– 33# wire basket	Tig Wire– 10# tube/30# Master Carton	SAW– 60# Coil
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