



Techalloy 316/316L

Description

Techalloy 316/316L is used to weld wrought and cast forms of similar composition. The presence of molybdenum increases its creep resistance at elevated temperatures and pitting resistance in the presence of chlorides. The lower ferrite level of this nominal composition reduces the rate of corrosion in certain media and is

Specifications & Approvals

AWS A5.9 ER316/316L

UNS S31683

UNS S31680

ISO 14343:2009 (19 12 3 L)

CWB

Typical Chemical Composition

C	Mn	Si	Cr	Mo	Ni	Nb	N	S	P	Cu	FN (WRC)
.016	1.87	.48	19.32	2.25	13.2			.010	.019		6

Typical Mechanical Properties

Tensile Strength	86,000 PSI	590 MPA
Yield Strength	58,000 PSI	400 MPA
Elongation	36%	

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) .045" (1.14mm) .062" (1.6mm))	26 to 29 28 TO 32 29 TO 33	160/210 180/250 200/280
Tig Welding	100% Argon				
Sub Arc Welding	Suitable flux may be used		3/32" (2.5mm) 1/8" (3.14mm) 5/32" (4.0mm)	28 to 33 29 TO 32 30 TO 33	275/350 350/450 400/550

Standard Packages:

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