

NON-MAGNETIC 316L

Non-magnetic 316L has the same analysis as ER316, except that the carbon content is limited to a maximum of 0.03% in order to reduce the possibility of formation of intergranular carbide precipitation. This low carbon alloy is not as strong at elevated temperatures as ER316H.

APPLICATION

This filler metal is primarily used for welding low carbon molybdenum-bearing austenitic alloys.

SPECIFICATION

MECHANICAL PROPERTIES

Tensile Strength (psi)	86,000 PSI/590 MPA
Yield Strength (psi)	58,000 PSI/400 MPA
Elongation %	36%

WELDING PARAMETERS

MIG Welding Direct Current; Electrode +VE

Shield Gas	98.99% Argon + 2/1% Oxygen 97% Argon + 3% CO ₂
Gas Flow	20 to 50 CFH
Voltage	29 to 33
Amperage	160/180 for .035" (0.9mm) 180/220 for .045" (1.14mm) 210/250 for .062" (1.6mm)

T.I.G. Welding Direct Current; Electrode -Ve

Shield Gas	100% Argon
Gas Flow	30 to 40 CFH

Sub-Arc Welding Direct Current; Electrode +Ve

Volatage	29 to 32
Amperage	300 to 350 for 3/32" (2.5 mm) 400 to 550 for 1/8" (3.14 mm) 500 to 650 for 5/32" (4.0 mm)
Speed of Welding	20 to 30 IPM (500 to 750 mm)/min.

CHEMICAL COMPOSITION

C.....0.016	P.....0.019
Mn.....1.87	N.....0.05
Si.....0.48	Fe.....Balance
Cr.....19.32	
Ni.....13.2	
MO.....2.25	
S.....0.01	

PACKAGING

MIG WIRE - 30# Spools; TIG Wire - 10# Tubes; SAW - 60# coils



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