

Stainless Steel Bare Wire

Alloy:HIL316LSiClass : ER316LSiConforms to Certification : AWS A5.9ASME SFA A5.9Alloy ER316LSi Welding data

Weld Process : Used for Mig, Tig & Submerged arc

AWS Chemical Composition Requirements

C=0.03 max	P=0.030max
Si=0.65-1.00	S-0.030max
Mn=1.0-2.50	Mo=2.00-3.00
Cr=18.0-20.0	Cu=0.75max
Ni=11.0-14.0	

Type of Filler wireGMAW " Mig Filler wire"Diameter Range

0.80-1.6mm

0.030"-1/16"

GTAW " Tig Process "Diameter Range

1.60-4.00mm

1/16"-5/32"

Deposited Chemical Composition % (Typical)

C = 0.014	Si = 0.35	Mn = 1.65
P = 0.011	S = 0.009	Cr = 18.80
Ni =12.25	Mo=2.55	

Submerged Arc WeldingDiameter Range

1.60-4.00mm

1/16"-5/32"

Deposited All Weld Metal Properties

Data is typical for ER316LSi weld metal deposited by mig using Argon+2% oxygen and Tig using 100% Argon as the shielding gas. Data on Sub-arc is not presented, as sub-arc is dependent on the type of flux used.

Mechanical Properties (R.T.)

Yield strength	408 MPa
Tensile strength	625MPa
Elongation	40%
Reduction of area	67%

Application

ER-316LSi affords the same characteristics as 316L. The high silican alloys better are stability along with minimal post-weld grinding . The low carbon in the weld metal gives excellent assurance against inter-granular corrosion.

