

Stainless Steel Welding Wire



GJ-ER308LSi

Copper-Free Solid Wire

(18Cr-8Ni ultra-low carbon, high-silicon)

- ▶ AWS A5.9 ER308LSi
- ▶ EN ISO 14343-A-G 19 9 L Si

Product description

GJ-ER308LSi is a high-silicon variant of ER308L, with silicon content of 0.65-1.00%, strictly complying with AWS A5.9 ER308LSi. The higher silicon improves weld pool fluidity, wetting, and bead appearance, making it the preferred choice for MIG/GMAW welding of 304/304L stainless steel.

Key Advantages

- ▶ Improved Wetting & Fluidity: Higher silicon content (0.65-1.00%) provides better weld pool fluidity and flatter, smoother bead profile.
- ▶ Reduced Spatter: Silicon enhances arc stability, producing significantly lower spatter levels compared to standard ER308L in GMAW.
- ▶ Faster Travel Speed: Improved fluidity allows higher travel speeds, increasing productivity in automated and semi-automatic welding.

Application Guide

- ▶ With Ar+2%O₂ shielding: For high-speed MIG welding of 304/304L in automotive exhaust, tube mills, and automated production lines.
- ▶ With 98%Ar+2%CO₂: For thin-gauge stainless fabrication where excellent bead appearance and minimal cleanup are required.
- ▶ For robotic welding: Ideal for automated and robotic welding cells due to consistent feeding and stable arc characteristics.

Stainless Steel Welding Wire

● Main constituents

Elements	C (Carbon)	Si (Silicon)	Mn (Manganese)	Cr (Chromium)	Ni (Nickel)	Mo (Molybdenum)	S (Sulfur)	P (Phosphorus)
AWS Requirement	≤0.03	0.65 - 1.00	1.0 - 2.5	19.5 - 22.0	9.0 - 11.0	≤0.75	≤0.030	≤0.030
Typical Actual Value	0.02	0.80	1.80	20.0	10.0	0.18	0.008	0.015

● Typical Mechanical Properties of Deposited Metal

Mechanical properties tested as all-weld metal with Ar+2%O₂ shielding gas (DC+). AWS A5.9 does not specify minimum mechanical properties for austenitic stainless wires; values shown are industry typical results.

Test Item	Yield Strength	Tensile Strength	Elongation	Ferrite Number
AWS A5.9 Requirement	—	—	—	4 - 8 FN
Typical Actual Result	380 MPa	590 MPa	36%	6 FN

● Reference Welding Parameters

Wire Diameter	0.8 mm (0.030")	1.0 mm (0.040")	1.2 mm (0.045")	1.6 mm (1/16")
Amperage	60 - 150	80 - 200	100 - 280	140 - 350
Voltage	18 - 22	20 - 26	22 - 30	24 - 34