

Stainless Steel TIG Family



PRODUCT FEATURES

- Used with Ar shielding gas
- Unique manufacturing technology results in an even clean wire surface
- High quality green rod with stable and consistent chemical composition
- Easily applied in all position welding
- Embossed on each end for easy alloy identification

PRODUCT	CONFORMANCE	PRODUCT DESCRIPTION
PRIMALLOY® JGS-308/308L/308LSi	AWS A5.9/A5.9M: ER308/ER308L/ER308LSi	308 is designed for the welding of 18%Cr-8%Ni base metal and stainless steels with similar alloy composition (Such as ASTM 304,304N,301,302,305,308)
		308L produces low carbon welds which increase the resistance to intergranular corrosion
		308LSi has higher silicon content which brings better wetting and fluidity to the weld puddle
PRIMALLOY® JGS-309/309L/309LSi	AWS A5.9/5.9M: ER309/ER309L/ER309LSi	309 is designed for the welding of 24%Cr-13Ni% base metal and stainless steels with similar alloy composition (such as ASTM 304,304N,305,308,309) ; Also for the welding of dissimilar steels.
		309L produces low carbon welds which increase the intergranular corrosion resistance
		309LSi has higher silicon content which brings better wetting and fluidity to the weld puddle
PRIMALLOY® JGS-316/316L/316LSi	AWS A5.9/A5.9M: ER316/ER316L/316LSi	316 is designed for the welding of 19%Cr-13%Ni-2%Mo base metal and stainless steels with similar alloy composition
		316L has high tensile strength in elevated temperatures and high resistance to pitting and crevice corrosion in chloride environment;
		316LSi has higher silicon content which brings better wetting and fluidity to the weld puddle

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APPROVALS

- ISO 9001 Quality Management System

APPLICATIONS

- Petrol Chemical Equipment Manufacturing
- Power Generation Construction
- Food & Beverage Equipment
- Shipbuilding & Offshore

WELDING POSITIONS

- All Positions

DIAMETERS AVAILABLE

- 1.6X1000mm
- 2.0X1000mm
- 2.4X1000mm
- 3.2X1000mm
- 4.0X1000mm

STANDARD PACKAGING

- Plastic Tube: 5KG, 10KG*

* Please contact your local Lincoln Electric sales office for alternative types of packaging

CHEMICAL COMPOSITION OF SOLID WIRE(Wt-%)

Products		%C	%Si	%Mn	%P	%S	%Cr	%Mo	%Ni	%Cu
PRIMALLOY® JGS-308	AWS Requirements	≤0.08	0.3-0.65	1.0-2.5	≤0.03	≤0.03	19.5-22	≤0.75	9.0-11.0	≤0.75
	Typical Value	0.034	0.49	1.85	0.017	0.006	19.9	0.016	10.3	0.032
PRIMALLOY® JGS-308L	AWS Requirements	≤0.03	0.3-0.65	1.0-2.5	≤0.03	≤0.03	19.5-22	≤0.75	9.0-11.0	≤0.75
	Typical Value	0.02	0.5	2.1	0.02	0.006	19.9	0.03	9.74	0.03
PRIMALLOY® JGS-308LSi	AWS Requirements	≤0.03	0.65-1.0	1.0-2.5	≤0.03	≤0.03	19.5-22	≤0.75	9.0-11.0	≤0.75
	Typical Value	0.022	0.78	2.05	0.016	0.013	19.91	0.022	9.70	0.042
PRIMALLOY® JGS-309	AWS Requirements	≤0.12	0.3-0.65	1.0-2.5	≤0.03	≤0.03	23-25	≤0.75	12-14	≤0.75
	Typical Value	0.043	0.46	1.75	0.013	0.006	23.78	0.021	12.69	0.01
PRIMALLOY® JGS-309L	AWS Requirements	≤0.03	0.3-0.65	1.0-2.5	≤0.03	≤0.03	23-25	≤0.75	12-14	≤0.75
	Typical Value	0.025	0.58	2.22	0.013	0.006	23.32	0.021	13.66	0.02
PRIMALLOY® JGS-309LSi	AWS Requirements	≤0.03	0.65-1.00	1.0-2.5	≤0.03	≤0.03	23.0-25.0	≤0.75	12.0-14.0	≤0.75
	Typical Value	0.016	0.86	1.75	0.018	0.01	23.37	0.017	13.5	0.02
PRIMALLOY® JGS-316	AWS Requirements	≤0.08	0.30-0.65	1.0-2.5	≤0.03	≤0.03	18.0-20.0	2.0-3.0	11.0-14.0	≤0.75
	Typical Value	0.03	0.39	1.78	0.02	0.011	18.6	2.25	12.5	0.03
PRIMALLOY® JGS-316L	AWS Requirements	≤0.03	0.3-0.65	1.0-2.5	≤0.03	≤0.03	25-28	2.0-3.0	11-14	≤0.75
	Typical Value	0.017	0.48	2.24	0.012	0.003	18.93	2.15	12.65	0.025
PRIMALLOY® JGS-316LSi	AWS Requirements	≤0.03	0.65-1.0	1.0-2.5	≤0.03	≤0.03	18-20	2.0-3.0	11-14	≤0.75
	Typical Value	0.019	0.89	2.16	0.022	0.009	19.25	2.18	12.71	0.020

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MECHANICAL PROPERTIES OF ALL-WELD-METAL

Products As-welded, 100% Ar shielding gas		Tensile Strength [MPa]	Elongation [%]
PRIMALLOY® JGS-308	AWS Requirements	≥550	≥35
	Typical Value	620	40
PRIMALLOY® JGS-308L	AWS Requirements	≥520	≥35
	Typical Value	600	41
PRIMALLOY® JGS-308LSi	AWS Requirements	---	---
	Typical Value	585	40
PRIMALLOY® JGS-309	AWS Requirements	≥550	≥30
	Typical Value	610	38
PRIMALLOY® JGS-309L	AWS Requirements	≥520	≥30
	Typical Value	595	39
PRIMALLOY® JGS-309LSi	AWS Requirements	---	---
	Typical Value	600	41
PRIMALLOY® JGS-316	AWS Requirements	≥520	≥30
	Typical Value	590	38
PRIMALLOY® JGS-316L	AWS Requirements	≥490	≥30
	Typical Value	580	38
PRIMALLOY® JGS-316LSi	AWS Requirements	---	---
	Typical Value	600	38

Customer Assistance Policy

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customers particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has not been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

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