

# PRIMALLOY™ JS-309/309L



## CONFORMANCE

- AWS A5.4/A5.4M E309-16
- AWS A5.4/A5.4M E309L-16

## FEATURES

- Rutile-Basic stainless steel electrode
- Weld on AC or DCEP polarity
- Excellent weldability in all position welding except vertical down
- Flux coating provides smooth arc transfer and easy slag removal
- Designed with low carbon levels to help eliminate carbide precipitation in high temperature service

## APPLICATION

- Designed for the welding of 22%Cr-12%Ni base metal and similar alloy composition stainless steels such as ASTM 309 309S 304 305
- Designed for joining stainless steels to mild or low alloy steels
- Designed for overlay welding on mild or low alloy steels
- Petrol Chemical Industry
- Power Generation Construction
- Shipbuilding & Offshore

## WELDING POSITIONS



## REDRYING

- For electrodes that have had a short or mild exposure to the atmosphere, re-drying at 300 °C for 1 hour will be sufficient. For electrodes that have been exposed to longer or more aggressive conditions or critical work environment, re-drying at 300-350 °C for 1-2 hours is recommended. After re-drying, electrodes should be stored in a portable electrode drying oven.

## APPROVAL

PRIMALLOY™ JS-309: CCS  
 PRIMALLOY™ JS-309L: CCS, ABS

# PRIMALLOY™ JS-309/309L

## DIAMETERS/PACKAGING

Diameter × Length (mm × mm)	Package - Weight (kg)	
	Inner box	Outer Carton
2.5 x 300	4	16
3.2 x 350	5	20
4.0 x 350	5	20
5.0 x 350	5	20

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

## ALL WELD METAL MECHANICAL PROPERTIES -- TYPICAL

Electrode	Condition	Tensile Strength (MPa)	Elongation (%)	Ferrite Number (FN)	
PRIMALLOY™ JS-309	AWS Requirement	As Welded	550	30	--
	Typical value	As Welded	600	37	13
PRIMALLOY™ JS-309L	AWS Requirement	As Welded	520	30	--
	Typical value	As Welded	600	37	13

## WELD DEPOSITE CHEMICAL COMPOSITIONS (Wt-%) -- TYPICAL

Electrode	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	
PRIMALLOY™ JS-309	AWS Requirement	≤0.15	≤1.0	0.5-2.5	≤0.04	≤0.03	22.0-25.0	≤0.75	12.0-14.0	≤0.75
	Typical value	0.026	0.77	0.88	0.022	0.014	24.27	0.115	12.37	0.018
PRIMALLOY™ JS-309L	AWS Requirement	≤0.04	≤1.0	0.5-2.5	≤0.04	≤0.03	22.0-25.0	≤0.75	12.0-14.0	≤0.75
	Typical value	0.026	0.77	0.81	0.022	0.014	24.27	0.115	12.37	0.018

## RECOMMENDED WELDING CURRENT (CURRENT POLARITY: DC+ & AC)

Diameter × Length (mm × mm)	Welding Position	2.5 x 300	3.2 x 350	4.0 x 350	5.0 x 350
Current (A)	1G, 2G, 2F	50-85	80-120	100-150	140-180
	3G up, 4G	45-80	70-110	90-140	—

### 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.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to change - This information is accurate to the best of our knowledge at the time of printing. Please refer to [www.lincolnelectric.com.cn](http://www.lincolnelectric.com.cn) for any updated information.

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