

# Lincolnweld® 308/308L

Stainless • AWS ER308, ER308L

## Key Features

- ▶ Designed to be used primarily with basic fluxes
- ▶ Versatile electrode designed to weld several types of austenitic steels
- ▶ Q2 Lot® - Certificate showing actual wire composition and calculated ferrite number (FN) available online
- ▶ Balanced chromium and nickel levels provide enough ferrite in the weld metal for high resistance to hot cracking
- ▶ Low carbon content recommended where there is a risk of intergranular corrosion

## Typical Applications

- ▶ ASTM A743, A744 Types CF-8 and CF-3
- ▶ For joining the more common austenitic stainless steel grades referred to as "18-8" steels
- ▶ ASTM A240 Types 302, 304, 304L

## Conformances

AWS A5.9/A5.9M: 2006	ER308, ER308L
ASME SFA-A5.9:	ER308, ER308L
ABS:	ER308, ER308L
CWB/CSA W48-06:	ER308L
EN ISO 14343-B:	SS308L

## Recommended Fluxes

Lincolnweld® 801, 802, 880, 880M, 882, ST-100, Blue Max® 2000

## DIAMETERS / PACKAGING

Diameter in (mm)	60 lb (27.2 kg) Coil
5/64 (2.0)	ED033147
3/32 (2.4)	ED033148
1/8 (3.2)	ED033149
5/32 (4.0)	ED033150

## MECHANICAL PROPERTIES<sup>(1)</sup> – As Required per AWS A5.9/A5.9M: 2006

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Ferrite Number
Requirements - AWS ER308, ER308L	Not Specified			
Test Results <sup>(3,5)</sup> - As-Welded	380 (55)	565 (82)	42	15

## WIRE & DEPOSIT COMPOSITION<sup>(1)</sup>

	%C <sup>(4)</sup>	%Cr	%Ni	%Mo	%Mn	%Si
Requirements - AWS ER308L	0.03 max.	19.5 - 22.0	9.0 - 11.0	0.75 max.	1.0 - 2.5	0.30 - 0.65
Typical Performance <sup>(3)</sup>						
Wire Composition	0.02	20.1	9.8	0.10	1.8	0.50
All Weld Metal Composition <sup>(5)</sup>	0.02	19.0 - 19.5	9.8	0.10	1.5 - 1.9	0.50 - 0.80

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Wire Feed Speed m/min (in/min)	Voltage (volts)	Current (amps)
5/64 (2.0)	2.0-6.1 (80-240)	24-30	190-500
3/32 (2.4)	1.5-5.3 (60-210)	26-32	195-575
1/8 (3.2)	0.9-2.8 (35-110)	28-34	200-700
5/32 (4.0)	0.8-1.9 (30-75)	30-36	320-775

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume. BEFORE USE, READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET (MSDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer on pg. 12. <sup>(4)</sup>AWS Requirement for ER308 is 0.08% max. carbon.

<sup>(5)</sup>Results shown correspond with the recommended Lincolnweld® and Blue Max® fluxes listed above, but not required per AWS A5.9-93.

*Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at [www.lincolnelectric.com](http://www.lincolnelectric.com)*

### TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

### CUSTOMER ASSISTANCE POLICY

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 information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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