

# Lincolnweld® 2594

Stainless • AWS ER2594

## Key Features

- ▶ A super-duplex grade electrode that provides matching chemistry and mechanical property characteristics to wrought super-duplex alloys such as 2507 and Zeron 100, as well as to super-duplex casting alloys (ATSM A890).
- ▶ The electrode is over-alloyed 2-3% in nickel to provide the optimum ferrite/austenite ratio in the finished weld resulting in high tensile and yield strength and superior resistance to stress corrosion, cracking (SCC) and pitting corrosion.

## Conformances

AWS A5.9/A5.9M: 2006:	ER2594
ISO 14343:2009:	25 9 4 N L

## Typical Applications

- ▶ Process Pipework
- ▶ Pumps and Valves
- ▶ Pressure Vessels

## Recommended Fluxes

P2000

## DIAMETERS / PACKAGING

Diameter in (mm)	55 lb (25 kg) Steel Spool
3/32 (2.4)	ED035156
1/8 (3.2)	ED035157

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

	%C	%Cr	%Ni	%Mo	%Mn	%Si
<b>Requirements</b> AWS ER2594	0.03 max.	24.0 - 27.0	8.0 - 10.5	2.5 - 4.5	2.5 max.	1.0 max.
<b>Typical Performance<sup>(2)</sup></b>	0.02	24.6	8.6	3.8	0.8	0.3
	%P	%S	%N	%Cu	%W	FN
<b>Requirements</b> AWS ER2594	0.03 max.	0.02 max.	0.20 - 0.30	1.5 max.	1.00 max.	Not Required
<b>Typical Performance<sup>(2)</sup></b>	0.02	0.01	0.25	0.01	0.01	30 - 60

## TYPICAL OPERATING PROCEDURES

Process	Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
SAW	3/32 (2.4) 1/8 (3.2)	28-33 29-32	275-350 350-450		Lincolnweld® P2000

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>See test results disclaimer on pg. 18.

*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.

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](http://www.lincolnelectric.com) for any updated information.

---

**THE LINCOLN ELECTRIC COMPANY**  
22801 St. Clair Avenue • Cleveland, OH • 44117-1199 • U.S.A.  
Phone: +1.216.481.8100 • [www.lincolnelectric.com](http://www.lincolnelectric.com)

