

# Lincolnweld® ST-100™

EN 760 – S A AS 2 • Stainless

## Typical Applications

- ▶ General submerged arc welding of common austenitic stainless steels such as 304, 304L, 316, 316L, 309 and 347

## Packaging

60 lb (27.2 kg) Plastic Bag

ED031856

## Key Features

- ▶ An alloy flux designed for use with solid stainless steel electrodes to compensate for chromium in the wire that is not recovered in the weld deposit
- ▶ Slag removal characteristics are exceptionally good, even on niobium (columbium) bearing steels
- ▶ Good performance on seamer applications

## MECHANICAL PROPERTIES<sup>(1)</sup>

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Ferrite Number
<b>Lincolnweld® ST-100<sup>(3)</sup></b>				
With Lincolnweld® S308/308L	405 (59)	600 (87)	38	10
With Lincolnweld® S309/309L	415 (60)	585 (85)	37	14
With Lincolnweld® S316/316L	415 (60)	585 (85)	40	10

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

	%C	%Mn	%Si	%Cr	%Ni	%Mo
<b>Lincolnweld® ST-100<sup>(3, 4)</sup></b>						
With Lincolnweld® S308/308L	0.01	1.9	0.50	19.6	9.8	0.10
Groove Weld	0.02	2.1	0.70	19.6	9.7	0.10
With Lincolnweld® S309/309L	0.02	2.1	0.40	23.8	13.7	0.10
Groove Weld	0.03	2.3	0.60	24.1	13.6	0.10
With Lincolnweld® S316/316L	0.02	1.7	0.45	19.0	11.9	2.20
Groove Weld	0.02	1.7	0.65	18.8	11.8	2.20

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer below. <sup>(4)</sup>Results shown are typical wire compositions for the Blue Max® subarc wires listed, and typical weld deposit composition for 1 in groove welds on matching plate.  
NOTE: There are no AWS requirements for submerged arc stainless steel deposits.

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.