

# Lincolnweld® 865™

EN 760 – S A AB 1; EN 760 – S A AR 1 • 800 Series Neutral Flux

## Recommended Wires

For Mild Steel

Lincolnweld® L-50®, L-61®, LA-71

For Low Alloy Steel

Lincolnweld® LA-75

## Key Features

- ▶ General purpose flux designed to weld butt joints and flat and horizontal fillets
- ▶ When used with Lincolnweld® L-50® or L-61®, it is capable of producing 480 MPa (70 ksi) tensile strength after stress relief
- ▶ Small loss of strength when used in the stress-relieved condition

## Product Information

Basicity Index: 1.0

Density: 1.3 g/cm<sup>3</sup>

## Typical Applications

- ▶ Butt joints and flat and horizontal fillets
- ▶ Pair with Lincolnweld® L-61® on A516 steels

## Packaging

50 lb (22.7 kg) Bag

EDS27857

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

	%SiO <sub>2</sub>	%MnO	%MgO	%CaF <sub>2</sub>	%Na <sub>2</sub> O	%Al <sub>2</sub> O <sub>3</sub>	%TiO <sub>2</sub>	% Metal Alloys
Lincolnweld® 865™	11	1	14	19	2	37	12	3 max.

## AWS TEST RESULTS<sup>(1)</sup>

Flux/Wire Combination	Weld Condition	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile strength MPa (ksi)	Elongation (%)	Charpy V-Notch J (ft•lbf) @ °C (°F)		AWS Classification (A5.17/A5.23)
L-50®	As-welded	500 (72)	580 (84)	27	53 (39)	-29 (-20)	F7A2-EM13K-H8
L-50®	Stress-relieved <sup>(3)</sup>	440 (64)	550 (80)	30	28 (21)	-46 (-50)	F7P5-EM13K-H8
L-61®	As-welded	480 (70)	570 (83)	22	85 (63)	-29 (-20)	F7A2-EM12K-H8
L-61®	Stress-relieved <sup>(3)</sup>	450 (65)	550 (80)	30	117 (86)	-29 (-20)	F7P2-EM12K-H8
LA-71	As-welded	540 (78)	630 (91)	26	73 (54)	-29 (-20)	F7A2-EM14K-H8
LA-75	As-welded	520 (76)	600 (87)	23	77 (57)	-29 (-20)	F8A2-ENi1K-G-H8
LA-75	Stress-relieved <sup>(3)</sup>	500 (73)	610 (88)	27	79 (58)	-29 (-20)	F8P2-ENi1K-G-H8

<sup>(1)</sup>See test results disclaimer below. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>Stress-relieved for 1 hour at 621°C (1150°F).  
NOTE: For the most up-to-date AWS certificates of conformance please visit [www.lincolnelectric.com](http://www.lincolnelectric.com)

*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.