

# Lincolnweld® 865

## 800 Series Neutral Flux (EN 760 – S A AR 1; EN 760 – S A AB 1)

Lincolnweld® 865 is a 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 as welded or after short- or long-term stress relief. For stress relieved applications with Lincolnweld® L-61 electrode – choose Lincolnweld® 865.

### Key Features

- Can be used in a variety of single pass and multiple pass applications.
- Small loss of strength when used in the stress-relieved condition.

### Typical Applications

- Butt joints and flat and horizontal fillets.
- 480 MPa (70 ksi) tensile strength after short- or long-term stress relief.
- Pair with Lincolnweld® L-61 on A516 steels.

### Product Information

- Basicity Index: 1.0
- Density: 1.3 g/cm<sup>3</sup>

### Recommended Wires

**For Mild Steel**  
Lincolnweld® L-50, L-61, LA-71

**For Low Alloy Steel**  
Lincolnweld® LA-75

### Packaging

- 50 lb (23 kg) Bag - EDS27857

Electrode Classification	Weld Condition	Tensile Strength		Elongation %	Impact Energy		Welding Position
		ksi (MPa)	ksi (MPa)		ft-lb (J)	ft-lb (J)	
L-50	As-welded	500 (72)	580 (84)	27	53 (39)	-29 (-20)	F7A2-EM13K-H8
L-50	Stress-relieved <sup>①</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>①</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>①</sup>	500 (73)	610 (88)	27	79 (58)	-29 (-20)	F8P2-ENi1K-G-H8

Lincolnweld® 865	Single Pass		Multiple Pass		Preheat	Interpass	Postheat	Welding Position
	1/8" (3.2mm)	3/16" (4.8mm)	1/4" (6.4mm)	5/16" (8.0mm)				
Lincolnweld® 865	11	1	14	19	2	37	12	3 max

<sup>①</sup> See test results disclaimer on pg. 49. For the most up-to-date AWS certificates of conformance please visit [www.lincolnelectric.com](http://www.lincolnelectric.com). <sup>②</sup> Measured with 0.2% offset. <sup>③</sup> Stress-relieved for 1 hour at 1150°F (621°C).