

LINCOLNWELD® 822™

800 Series Neutral Flux ■ EN ISO 14174 – S A FB 1

KEY FEATURES

- Designed for chrome-moly applications with Lincolnweld® LA-92 and LA-93 submerged arc wires
- Enables high Charpy V-Notch toughness at temperatures below -40°C (-40°F)
- Step-cooling tests show high resistance to temper embrittlement when welded with Lincolnweld LA-92 and LA-93
- Low Bruscato factor (X<10) when welded with Lincolnweld LA-92 and LA-93
- Certificate of Conformance available with LA-71 to create end user convenience with one flux
- Actual (Type 3.1) certificates for each lot of flux showing chemical composition, particle size and moisture level are available in the certificate center of lincolnelectric.com

PACKAGING

50 lb (22.7 kg) Plastic Bag ED036223

TYPICAL APPLICATIONS

- Power Generation
- Process Chemical
- Pressure Vessels

RECOMMENDED WIRES

Mild Steel
Lincolnweld® LA-71™

Low Alloy Steel
Lincolnweld® LA-92, LA-93

PRODUCT INFORMATION

Basicity Index: 2.6
Density: 1.3

FLUX COMPOSITION⁽¹⁾

| | % SiO ₂ | % MnO | % MgO | % CaF ₂ | % Na ₂ O | % Al ₂ O ₃ | % CaO | % Metal Alloys |
|------------------|--------------------|-------|-------|--------------------|---------------------|----------------------------------|-------|----------------|
| Lincolnweld® 822 | 15 | 2 | 32 | 21 | 3 | 18 | 5 | 3 max |

AWS TEST RESULTS⁽¹⁾

| Flux/Wire Combination | Weld Condition | Yield Strength ⁽²⁾ MPa (ksi) | Tensile Strength MPa (ksi) | Elongation (%) | Charpy V-Notch | | AWS Classification (A5.17/A5.23) |
|-----------------------|--------------------------------|--|-------------------------------|----------------|----------------|-----------|-------------------------------------|
| | | | | | J (ft•lbf) | @ °C (°F) | |
| LA-92 | As-welded | 640 (92) | 710 (102) | 24 | 95 (70) | -29 (-20) | F9A2-EB2R-B2R-H4 |
| LA-92 | Stress-relieved ⁽³⁾ | 480 (70) | 580 (85) | 29 | 200 (148) | -40 (-40) | F8P4-EB2R-B2R-H4 |
| LA-93 | As-welded | 760 (110) | 880 (128) | 20 | 35 (26) | -18 (0) | F11A0-EB3R-B3R-H4 |
| LA-93 | Stress-relieved ⁽³⁾ | 550 (80) | 660 (96) | 23 | 156 (115) | -40 (-40) | F9P4-EB3R-B3R-H4 |
| LA-71 | As-welded | 480 (70) | 580 (85) | 27 | 151 (111) | -62 (-80) | F7A8-EM14K-H4 |
| LA-71 | Stress-relieved ⁽⁴⁾ | 430 (63) | 560 (81) | 31 | 127 (93) | -62 (-80) | F7P8-EM14K-H4 |

⁽¹⁾See test results disclaimer. ⁽²⁾ Measured with 0.2% offset. ⁽³⁾ Stress-relieved for 1 hour at 691°C (1275°F). ⁽⁴⁾ Stress-relieved for 1 hour at 620°C (1150°F).

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at 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 for any updated information.