



# 308L Sterling®

**AWS E308L-17**

Replaces 020903

150-C, INDEX: 060127

## DESCRIPTION:

**308L Sterling®** is designed for the welding of type 308L base metals with low or medium carbon content. The electrode itself has low carbon content to prevent carbide precipitation during welding as well as to inhibit any subsequent carbide precipitation of the weld during service. It yields a concave weld bead that is smooth and refined.

Note: Actual certs are included in every master carton of stainless stick electrodes at no charge.

| Features   | Benefits  |
|--|---|
| <ul style="list-style-type: none"> <li>• Spray arc transfer</li> <li>• Directional arc</li> <li>• Easy strike and re-strike</li> <li>• Limited all-position</li> </ul> | <ul style="list-style-type: none"> <li>• Low spatter and less clean-up</li> <li>• Metal goes where directed</li> <li>• Easy to use, less chance of starting defects</li> <li>• Welds extremely well in flat, horizontal and limited capability in vertical (up) and overhead positions</li> <li>• Less chance of slag inclusions</li> <li>• Extends shelf life of product in open environments</li> </ul> |
| <ul style="list-style-type: none"> <li>• Self-detaching slag</li> <li>• Extremely high moisture resistance</li> </ul>  |   |

## TYPICAL WELD METAL PROPERTIES\* (CHEM PAD):

| Weld Metal Analysis |       | AWS Spec     |
|---------------------|-------|--------------|
| Carbon (C)          | 0.03  | 0.04 max     |
| Manganese (Mn)      | 1.14  | 0.5 to 2.5   |
| Phosphorus (P)      | 0.012 | 0.04 max     |
| Sulphur (S)         | 0.013 | 0.03 max     |
| Silicon (Si)        | 0.43  | 0.90 max     |
| Copper (Cu)         | 0.10  | 0.75 max     |
| Chromium (Cr)       | 19.68 | 18.0 to 21.0 |
| Nickel (Ni)         | 9.89  | 9.0 to 11.0  |
| Molybdenum (Mo)     | 0.10  | 0.75 max     |

## TYPICAL MECHANICAL PROPERTIES\* (AS WELDED):

|                             |                      | AWS Spec     |
|-----------------------------|----------------------|--------------|
| Tensile Strength            | 83,000 psi (573 MPa) | 80,000 psi   |
| Yield Strength              | 64,000 psi (442 MPa) | not required |
| Elongation % in 2"          | 37%                  | 35%          |
| DeLong Ferrite Number Range | 4-10                 | not required |
| Schaeffler Number Range     | 4-10                 | not required |
| WRC Number Range (1992)     | 4-10                 | not required |

Note: Nitrogen (N) assumed to be 0.06% for calculation purposes.

## CONFORMANCES AND APPROVALS:

- AWS Spec A5.4, Class E308L-17 • ASME SFA5.4

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and McKay expressly disclaims any liability incurred from any reliance thereon. Typical data are obtained when welded and tested in accordance with AWS A5.4 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by McKay.



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## RECOMMENDED WELDING PROCEDURES:

- GENERAL:** DCEP (electrode positive, work negative) or AC
- ARC LENGTH:** Short (less than half the diameter of the electrode)
- FLAT & HORIZONTAL:** Angle electrode 10-15° from 90°
- VERTICAL-UP:** Use weaving techniques. Reduced amperage compared to flat position setting
- OVERHEAD:** Use slight weaving motion within the puddle
- STORAGE:** Sterling electrodes have a high degree of moisture resistance; however, for critical applications, the electrodes should be held at 225° F after opening.
- RECONDITIONING:** If exposed to atmosphere for extended periods, recondition at 500°F for 1 hour

## RECOMMENDED OPERATING PARAMETERS:

| FLAT & HORIZONTAL |          |     |               |              |              |              |
|-------------------|----------|-----|---------------|--------------|--------------|--------------|
| Inches            | Diameter |     | Type of Power | Minimum Amps | Optimum Amps | Maximum Amps |
|                   | Inches   | mm  |               |              |              |              |
| 3/32              | 3/32     | 2.4 | DCEP or AC    | 45           | 65           | 80           |
| 1/8               | 1/8      | 3.2 | DCEP or AC    | 55           | 105          | 120          |
| 5/32              | 5/32     | 4.0 | DCEP or AC    | 65           | 140          | 170          |
| 3/16              | 3/16     | 4.8 | DCEP or AC    | 160          | 170          | 205          |

## AVAILABLE DIAMETERS AND PACKAGES:

| Inches | Diameter |     | Length |     | 6-lb. Can   | 10-lb. Can  |
|--------|----------|-----|--------|-----|-------------|-------------|
|        | Inches   | mm  | Inches | mm  |             |             |
| 3/32   | 3/32     | 2.4 | 10     | 254 | S493930-032 | —           |
| 1/8    | 1/8      | 3.2 | 14     | 355 | —           | S493944-033 |
| 5/32   | 5/32     | 4.0 | 14     | 355 | —           | S493951-033 |
| 3/16   | 3/16     | 4.8 | 14     | 355 | —           | S493958-033 |

Material Safety Data Sheets on any McKay product may be obtained from McKay Customer Service.

Because McKay is constantly improving products, McKay reserves the right to change design and/or specifications without notice.

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