



Unibraze E308L-16

DESCRIPTION:

Primarily designed for welding type 308L base metal with low or medium carbon content, the UNIBRAZE E308L-16 all-position electrode contains low carbon to avert carbide precipitation during welding as well as weld service. Excellent for welding 18Cr-8Ni steels. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex. The controlled silicon content provides maximum corrosion/ cracking resistance. The high purity core wire gives very low carbon content.

APPLICATIONS:

UNIBRAZE E308L-16 electrode designed for ease of use on types 304L, 301, 302, 303, 308 and 321. It is used on typical brewery, food, and pharmaceutical equipment. Also for architectural fabrication.

TYPICAL ALL WELD METAL PROPERTIES:

Microstructure: Austenite with 3-9% ferrite. Typical ferrite number is 6.

Weld Metal Analysis

| | | | |
|----------------|------|-----------------|---------|
| Carbon (C) | 0.02 | Manganese (Mn) | 0.80 |
| Silicon (Si) | 1.00 | Sulphur (S) | 0.01 |
| Phosphorus (P) | 0.02 | Chrome (C) | 19.5 |
| Nickel (N) | 10.0 | Molybdenum (Mo) | 0.75 |
| Copper (Cu) | 0.05 | Iron (Fe) | Balance |

TYPICAL MECHANICAL PROPERTIES:

Undiluted Weld Metal

| | |
|------------------|--|
| Tensile Strength | Maximum Value Up to: 77,500 PSI (530 MPa) |
| Yield Strength | 54,000 PSI (370 MPa) |
| Elongation | 38% |
| Impact Energy | 35J: -157°F (-105°C) |
| Hardness | Brinell 205, Rockwell B94 |

CONFORMANCES AND APPROVALS:

| | |
|---------------------------|------------------------|
| AWS/ASME A 5.4: E 308L-16 | EN 1600: E 19 9 L R 32 |
| DIN 8556: E19.9LR 26 | ISO 3581 E19.9 L R 32 |
| NFA 81-343: EZ 19.9 LR 26 | BS 2926 - 1984 19.9L R |

Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its product.



WELDING CURRENT & INSTRUCTIONS

Recommended Current: DC Reverse (+) or AC

| | | | | | |
|------------------|------------|------------|------------|------------|------------|
| Diameter (mm) | 1/16 (1.6) | 5/64 (2.0) | 3/32 (2.5) | 1/8 (3.25) | 5/32 (4.0) |
| Minimum Amperage | 25 | 30 | 55 | 75 | 90 |
| Maximum Amperage | 35 | 50 | 70 | 110 | 140 |

Welding Techniques: Material to be welded should be clean of all contaminants. Maintain a short arc and use stringer beads rather than a weave technique.

Welding Positions: Flat, Horizontal, Vertical up, Overhead

Deposition Rates:

| Diameter (mm) | Length (mm) | Weldmetal/ Electrode | Electrodes per lb (kg) of Weldmetal | Arc Time of Deposition min/lb (kg) | Amperage Settings | Recovery Rate |
|---------------|-------------|----------------------|-------------------------------------|------------------------------------|-------------------|---------------|
| 1/16 (1.6) | 10" (250) | .13oz (3.6g) | 125 (275) | 55 (121) | 30 | 100% |
| 5/64 (2.0) | 12" (300) | .14oz (4g) | 114 (251) | 47 (103) | 40 | 100% |
| 3/32 (2.5) | 12" (300) | .3 oz. (9g) | 50 (109) | 35 (76) | 65 | 100% |
| 1/8 (3.25) | 14" (350) | .7oz (20g) | 22 (49) | 21 (46) | 95 | 100% |
| 5/32 (4.0) | 14" (350) | 1 oz (29g) | 15 (33) | 18 (40) | 120 | 100% |

APPROXIMATE ELECTRODE PACKAGING & DIMENSIONS

| Diameter (mm) | 1/16 (1.6) | 5/64 (2.0) | 3/32 (2.5) | 1/8 (3.25) | 5/32 (4.0) |
|-----------------|------------|------------|------------|------------|------------|
| Length (mm) | 10" (250) | 12" (300) | 12" (300) | 14" (350) | 14" (350) |
| Electrodes / lb | 67 | 42 | 28 | 13 | 9 |
| Electrodes / kg | 147 | 92 | 62 | 29 | 20 |

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