

## SelectAlloy 308L

### Description:

SelectAlloy 308L is a gas-shielded, flux cored, stainless steel electrode designed to weld in the flat and horizontal positions. It has a nominal weld metal composition of 20% Cr, 10% Ni and a maximum carbon content of 0.04%. The low carbon in this alloy minimizes carbide precipitation and makes it more resistant to intergranular corrosion. It is designed for use with 100% carbon dioxide or a blend of 75-80% argon/balance carbon dioxide. Shielding gas mixtures with more than 75-80% Argon are not recommended.

### Classifications & Approvals:

- E308LT0-1, E308LT0-4 per AWS A5.22 (Also meets E308T0-1, E308T0-4)
- CWB: E308LT0-1, E308LT0-4

### Characteristics:

SelectAlloy 308L produces a finely rippled, even and well washed bead with either CO<sub>2</sub> or argon + 20-25% CO<sub>2</sub> shielding gas. The arc transfer is smooth, with minimal spatter. The slag peels freely, minimizing cleanup time.

### Applications:

SelectAlloy 308L finds use in welded components for the chemical, paper, pharmaceutical and textile industries. It may be used to weld 301, 302, 304L, 308, and 308L stainless steel. Types 321 and 347 may also be welded as long as the service temperature does not exceed 500°F.

### Typical Mechanical Properties(CO<sub>2</sub>):

|                                 |        |
|---------------------------------|--------|
| Ultimate Tensile Strength (psi) | 82,300 |
| Yield Strength (psi)            | 58,700 |
| Percent Elongation              | 38     |

\*Strength levels will be slightly higher w/Ar+20-25% CO<sub>2</sub>

### Typical Weld Deposit Chemistry (CO<sub>2</sub>):

| Shielding Gas      | C    | Cr    | Ni    | Mn   | Si   | N    |
|--------------------|------|-------|-------|------|------|------|
| 100CO <sub>2</sub> | 0.03 | 20.10 | 10.40 | 1.22 | 0.63 | 0.05 |

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### Typical Welding Parameters (CO<sub>2</sub>):

| Diameter     | WFS (ipm)  | Amperage   | Voltage   | ESO (in.)        | Dep. Rate (lbs/hr) |
|--------------|------------|------------|-----------|------------------|--------------------|
| .035"        | 300        | 110        | 24        | 1/2"-5/8"        | 3.8                |
| <b>.035"</b> | <b>400</b> | <b>135</b> | <b>26</b> | <b>1/2"-5/8"</b> | <b>5.1</b>         |
| <b>.035"</b> | <b>550</b> | <b>160</b> | <b>27</b> | <b>1/2"-5/8"</b> | <b>6.8</b>         |
| .035"        | 650        | 175        | 29        | 1/2"-5/8"        | 8.2                |
| .045"        | 200        | 120        | 25        | 5/8"-3/4"        | 4.3                |
| <b>.045"</b> | <b>335</b> | <b>170</b> | <b>27</b> | <b>5/8"-3/4"</b> | <b>7.1</b>         |
| <b>.045"</b> | <b>440</b> | <b>200</b> | <b>29</b> | <b>5/8"-3/4"</b> | <b>9.3</b>         |
| .045"        | 780        | 290        | 35        | 5/8"-3/4"        | 17.0               |
| 1/16"        | 150        | 150        | 24        | 3/4"-1"          | 5.0                |
| <b>1/16"</b> | <b>235</b> | <b>210</b> | <b>28</b> | <b>3/4"-1"</b>   | <b>7.8</b>         |
| <b>1/16"</b> | <b>345</b> | <b>270</b> | <b>31</b> | <b>3/4"-1"</b>   | <b>11.3</b>        |
| 1/16"        | 500        | 350        | 34        | 3/4"-1"          | 17.0               |

\* Optimum conditions are in boldface type. Lower by 2 volts when using Ar+20-25% CO<sub>2</sub>.

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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. 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 products.