

## SelectAlloy 308LSi-C

### Description:

**SelectAlloy 308LSi-C** is a gas-shielded, metal cored, stainless steel electrode. It has a nominal composition of 21% Cr, 10% Ni, 0.8% Si and a maximum carbon content of 0.03%. The higher silicon level improves bead wetting. The low carbon in this alloy minimizes carbide precipitation and makes it more resistant to intergranular corrosion. It is designed for use with argon/1-2% oxygen or argon/1-2% CO<sub>2</sub> shielding gases.

### Classification:

- EC308LSi per AWS A5.22 (Also per AWS A5.9:2006)

### Characteristics:

**SelectAlloy 308LSi-C** operates with a smooth, spray arc transfer. It produces little or no slag and virtually no spatter, minimizing cleanup. It offers higher deposition rates and more controlled penetration than the equivalent solid electrode. As a result it operates at higher travel speeds and handles poor fitup.

### Applications:

**SelectAlloy 308LSi-C** is ideally suited for making small butt, lap and fillet welds on thin material at elevated travel speeds. The additional silicon in this product will improve bead wetting and produce a cosmetically appealing weld. It may be used to weld 301, 302, 304L, 308, and 308L grades of stainless. Typical applications are in welded components for the chemical, paper, textile and pharmaceutical industries and food service equipment.

### Typical Mechanical Properties(Ar-2%O<sub>2</sub>):

Ultimate Tensile Strength (psi)	89,900
Yield Strength (psi)	63,000
Percent Elongation	42

### Typical Weld Deposit Chemistry:

<u>Shielding Gas</u>	<u>C</u>	<u>Cr</u>	<u>Ni</u>	<u>Mn</u>	<u>Si</u>	<u>N</u>
75Ar/2% CO <sub>2</sub>	0.02	20.00	10.30	1.40	0.80	0.05
Ferrite Number (WRC, 1992) - 14						

### Typical Welding Parameters (Ar-2%O<sub>2</sub>)\*:

Diameter	WFS (ipm)	Amperage	Voltage	ESO (in.)	Dep. Rate (lbs/hr)
.035"	350	155	22	1/2-5/8	5.9
<b>.035"</b>	<b>500</b>	<b>205</b>	<b>23</b>	<b>1/2-5/8</b>	<b>8.6</b>
<b>.035"</b>	<b>600</b>	<b>230</b>	<b>25</b>	<b>1/2-5/8</b>	<b>10.2</b>
.035"	700	245	26	1/2-5/8	11.8
.045"	250	180	21	1/2-5/8	7.1
<b>.045"</b>	<b>400</b>	<b>240</b>	<b>23</b>	<b>1/2-5/8</b>	<b>11.3</b>
<b>.045"</b>	<b>500</b>	<b>280</b>	<b>25</b>	<b>1/2-5/8</b>	<b>14.1</b>
.045"	650	300	28	1/2-5/8	18.4
1/16"	150	190	24	3/4-1	7.7
<b>1/16"</b>	<b>250</b>	<b>280</b>	<b>25</b>	<b>3/4-1</b>	<b>12.8</b>
<b>1/16"</b>	<b>350</b>	<b>385</b>	<b>26</b>	<b>3/4-1</b>	<b>17.9</b>
1/16"	450	490	32	3/4-1	23.1

\* Optimum conditions are in **boldface type**.

Rev 0 (04/30/2014)

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.