

## SelectAlloy 309LCR-C

### Description:

SelectAlloy 309LCR-C is a specially formulated gas-shielded, metal cored, stainless steel electrode with increased resistance to cracking. It has a nominal composition of 24% chromium, 13% nickel, 0.02% carbon and a small addition of titanium. It is designed for use with argon/1-2% oxygen or argon/1-2% CO<sub>2</sub> shielding gases.

### Classification:

- EC309; EC309L per AWS A5.22 (Also per AWS A5.9:2006)

### Characteristics:

SelectAlloy 309LCR-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 fit-up.

### Applications:

SelectAlloy 309LCR-C is ideally suited for making small butt, lap and fillet welds on thin material at elevated travel speeds. It finds application in the welding of refinery and chemical processing equipment, as well as furnace and auto exhaust parts. It is used to weld type 309 stainless steel, to join carbon and low alloy steels to austenitic stainless steels, and in the welding of dissimilar materials where cracking may be a problem.

### Typical Mechanical Properties

Ultimate Tensile Strength (psi)	84,000
Yield Strength (psi)	64,200
Percent Elongation	35

### Typical Weld Deposit Chemistry (Ar-2%O<sub>2</sub>):

<u>C</u>	<u>Mn</u>	<u>Cr</u>	<u>Si</u>	<u>Ni</u>	<u>Ti</u>
0.02	1.50	23.20	0.50	13.70	0.04
Ferrite Number (WRC, 1992) – 10					

### Typical Welding Parameters (DCEP)\*:

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**.

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.

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