

## SelectAlloy 309T0-3

### Description:

SelectAlloy 309T0-3 is a lower cost, self-shielded, flux cored, stainless steel electrode designed to weld in the flat and horizontal positions in applications where lower carbon levels are not required. It has a nominal weld metal composition of 24% chromium and 13% nickel with a maximum content of 0.10%.

SelectAlloy 309T0-3 is designed to be used without a shielding gas. It should not be run under a shielding gas.

### Classification:

- E309T0-3 per AWS A5.22

### Characteristics:

SelectAlloy 309T0-3 produces a flat, well washed bead. The arc transfer is globular, with low spatter. Penetration is lower than with gas shielded wires, making it ideal for surfacing or welding over gaps.

### Applications:

SelectAlloy 309T0-3 is used for the cladding of carbon steels. It may also be used to weld Type 309 stainless steel, and to join carbon and low alloy steels to austenitic stainless steels where lower carbon levels are not required.

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

C	Mn	Cr	Si	Ni	N*
0.04	1.30	24.00	0.70	12.50	0.10
Ferrite Number (WRC, 1992) - 10					

\*The nitrogen levels in self-shielded stainless steel deposits can vary widely depending on the welding parameters used. Since nitrogen has a strong effect on the ferrite level (increasing nitrogen lowers the ferrite number) careful control of parameters is necessary to maintain consistent ferrite levels.

### Typical Welding Parameters (DCEP):

Diameter	WFS (ipm)	Amperage	Voltage	ESO (in.)
.045"	180	100	24-26	5/8-3/4"
.045"	240	125	24-27	5/8-3/4"
.045"	300	145	25-28	5/8-3/4"
.045"	400	170	27-30	5/8-3/4"
.045"	500	190	29-31	5/8-3/4"
1/16"	150	125	27-30	3/4-1"
1/16"	200	155	29-32	3/4-1"
1/16"	250	190	28-31	3/4-1"
1/16"	300	215	30-33	3/4-1"
1/16"	350	240	31-33	3/4-1"
3/32"	135	250	25-27	1 1/4-1 1/2"
3/32"	180	300	27-29	1 1/4-1 1/2"
3/32"	225	350	28-30	1 1/4-1 1/2"
3/32"	300	400	29-31	1 1/4-1 1/2"
3/32"	340	450	29-31	1 1/4-1 1/2"

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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