

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, equal legged, and well washed bead geometry with either 100% CO₂ or 75-80% Ar/balance CO₂ 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:

	<u>CO₂</u>	<u>75% Ar/25% CO₂</u>
Ultimate Tensile Strength (psi)	94,000	94,500
Yield Strength (psi)	61,500	62,500
Percent Elongation	34	31

Typical Weld Deposit Chemistry:

	<u>CO₂</u>	<u>75% Ar/25% CO₂</u>
Carbon (C)	0.03	0.03
Chromium (Cr)	19.5	19.7
Nickel (Ni)	9.5	9.5
Manganese (Mn)	1.46	1.63
Silicon (Si)	0.78	0.85
Ferrite Number (WRC, 1992)	9	10

Typical Welding Parameters (CO₂)*:

<u>Diameter</u>	<u>WFS (ipm)</u>	<u>Amperage</u>	<u>Voltage</u>	<u>CTWD</u>	<u>Dep. Rate (lbs/hr)</u>
.045"	200	120	25	5/8 – 3/4"	4.3
.045"	335	170	27	5/8 – 3/4"	7.1
.045"	440	200	29	5/8 – 3/4"	9.3
.045"	780	290	35	5/8 – 3/4"	17.0
1/16"	150	150	24	3/4 – 1"	5.0
1/16"	235	210	28	3/4 – 1"	7.8
1/16"	345	270	31	3/4 – 1"	11.3
1/16"	500	350	34	3/4 – 1"	17.0

* Optimum conditions are in **boldface** type. Lower by 1-2 volts when using 75-80% Ar/balance CO₂.

Standard Diameters: **

1/16", 0.045"