

SelectAlloy 310G-C

Classification:

No AWS class.

Description:

SelectAlloy 310G-C is a gas-shielded, metal cored, stainless steel electrode. It has a modified 310 chemistry with a nominal composition of 26% chromium, 20% nickel and 5% manganese. The addition of manganese reduces the tendency for hot cracking of this highly austenitic alloy. It is designed for use with argon/1-2% oxygen or argon/1-2% CO₂ shielding gases.

Characteristics:

SelectAlloy 310G-C operates with a smooth, spray arc transfer. It produces little or no slag and low 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 310G-C is used to weld 310 stainless steel. It may also be used to weld 410 and 430 stainless steels when preheating or postweld heat treatments are not possible. The metal cored feature makes this electrode ideally suited for making small butt, lap and fillet welds on thin material at elevated travel speeds. Typical applications involve elevated temperatures such as equipment for heat treating, chemical and food processing.

Typical Mechanical Properties (98% Ar-2% O₂):

Ultimate Tensile Strength (psi)	87,000
Yield Strength (psi)	64,200
Percent Elongation	33

Typical Weld Deposit Chemistry:

Shielding Gas	C	Cr	Ni	Mn	Si	N
98% Ar-2% O ₂	0.08	25.80	19.90	5.50	0.50	0.05

Typical Welding Parameters (Ar-2%O₂)*:

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