

SelectAlloy 308L CRYO

Description:

SelectAlloy 308L CRYO 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%. It is designed for cryogenic applications where good weld metal toughness is required. It is designed for use with a blend of 75-80% argon/balance carbon dioxide. Shielding gas mixtures with more than 75-80% Argon are not recommended.

Classifications:

- E308LT0-4 per AWS A5.22

Characteristics:

SelectAlloy 308L CRYO produces a finely rippled, even and well washed bead with argon + 20-25% CO₂ shielding gas. The arc transfer is smooth, with minimal spatter. The slag peels freely, minimizing cleanup time.

Applications:

SelectAlloy 308L CRYO is designed to be used in the fabrication and repair of cryogenic components. These applications require weld metal toughness at liquid nitrogen temperatures (-320°F).

Typical Mechanical Properties(Ar-25CO₂):

Ultimate Tensile Strength (psi)	79,800
Yield Strength (psi)	51,100
Percent Elongation	49
CVN @ -320°F (ft-lbs)	23
Lateral Expansion @-320°F (mils)	21

Typical Weld Deposit Chemistry (wt%) :

Shielding Gas	C	Cr	Ni	Mn	Si	N
75Ar/25CO ₂	0.02	18.70	10.50	1.50	0.70	0.05

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Typical Welding Parameters (Ar-25CO₂)*:

Diameter	WFS (ipm)	Amperage	Voltage	ESO (in.)	Dep. Rate (lbs/hr)
.035"	300	110	24	1/2-5/8	3.8
.035"	400	135	26	1/2-5/8	5.1
.035"	550	160	27	1/2-5/8	6.8
.035"	650	175	29	1/2-5/8	8.2
.045"	200	120	23	5/8-3/4	4.3
.045"	335	170	25	5/8-3/4	7.1
.045"	440	200	27	5/8-3/4	9.3
.045"	780	290	33	5/8-3/4	17.0
1/16"	150	150	22	3/4-1	5.0
1/16"	235	210	26	3/4-1	7.8
1/16"	345	270	29	3/4-1	11.3
1/16"	500	350	32	3/4-1	17.0

* Optimum conditions are in boldface type.

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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.