

SelectAlloy 2209-AP

Description:

SelectAlloy 2209-AP is a flux cored, all position electrode designed to weld duplex stainless steels of 22Cr-9Ni-2Mo-N type. The weld deposit has a 'duplex' microstructure of austenite and ferrite and normally gives ferrite in the range of 25 to 40 FN. It has very good resistance to intergranular corrosion, pitting and to stress corrosion cracking in environments containing H₂S and chlorides. It is designed to be used with both CO₂ and 75Ar/25 CO₂ shielding gas.

Classifications:

- E2209T1-1 and E2209T1-4 per AWS A5.22, SFA 5.22

Characteristics:

SelectAlloy 2209-AP provides superb performance characteristics in all positions. The electrode gives a smooth, stable arc and welds with very low spatter. The slag comes off easily and the bead is shiny, smooth and silvery in appearance.

Applications:

SelectAlloy 2209-AP electrodes find application in the chemical and fertilizer industries, off-shore pipelines and sour gas lines. It is used to weld 2205, 2304 and other similar types of duplex stainless steel.

Typical Mechanical Properties:

	<u>75% Ar/25% CO₂</u>	<u>CO₂</u>
Ultimate Tensile Strength (psi)	113,000	110,400
Yield Strength (psi)	85,000	79,000
Percent Elongation	31	32
CVN (ft-lb f) @ -40 F	44	47

Typical Weld Deposit Chemistry:

<u>C</u>	<u>Cr</u>	<u>Ni</u>	<u>Mo</u>	<u>Mn</u>	<u>Si</u>	<u>N</u>
0.03	22.10	9.10	2.70	1.70	0.80	0.12
Ferrite Number (WRC, 1992) - 35						

Typical Welding Parameters (Ar-25%CO₂)*:

<u>Diameter</u>	<u>WFS (ipm)</u>	<u>Amperage</u>	<u>Voltage</u>	<u>ESO (in.)</u>	<u>Dep. Rate (lbs/hr)</u>
.045"	250	130	22	5/8-3/4	5.4
.045"	300	160	24	5/8-3/4	6.3
.045"	425	200	26	5/8-3/4	9.2
.045"	780	270	32	5/8-3/4	16.2
1/16"	150	170	23	3/4-1	5.4
1/16"	195	215	25	3/4-1	7.0
1/16"	240	250	26	3/4-1	8.6
1/16"	320	305	27	3/4-1	11.5

- Optimum conditions are in **boldface type**.

* For CO₂ add 2 volts

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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.