

SelectAlloy 82-AP

Description:

SelectAlloy 82-AP is a gas-shielded, flux cored, nickel based electrode designed to weld in all positions. It has a nominal weld metal composition of 20% Cr, 3% Mn, 2.5% Nb, balance Nickel. It is primarily used for welding alloys 600, 601, and 800 to themselves, for the clad side of joints in steel clad with nickel-chromium-iron alloys and for dissimilar welding of nickel based alloys. **SelectAlloy 82-AP** is designed for use with either 75% argon/balance CO₂ or 100% CO₂ shielding gas.

Classification:

- ENiCr3T1-1/4 per AWS A5.34

Characteristics:

SelectAlloy 82-AP provides superb performance characteristics in all positions, using either argon + 25% CO₂ or 100% CO₂ shielding gas. Out of position deposition rates are significantly higher than those achieved with solid wires or covered electrodes. Flat, well washed beads can be achieved with minimal weaving. Spatter is very low and slag peeling is excellent, minimizing cleanup.

Applications:

SelectAlloy 82-AP has excellent resistance to pitting and stress corrosion cracking in chloride contaminated environments, making it ideal for welding in desalination plants. It is also suitable for welding applications that span a wide range of temperatures, from cryogenic to elevated, such as piping, furnace equipment, petrochemical facilities and power generation plants.

Typical Mechanical Properties*:

Ultimate Tensile Strength (psi)	95,000
Yield Strength (psi)	54,000
Percent Elongation	43

Typical Weld Deposit Chemistry*:

<u>Shielding Gas</u>	<u>C</u>	<u>Cr</u>	<u>Mn</u>	<u>Nb</u>	<u>Fe</u>	<u>Ni</u>
	0.03	19.0	2.8	2.6	1.5	73.0

*The properties shown are with CO₂ shielding gas. Results with Ar-25% CO₂ are very similar.

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

<u>Diameter</u>	<u>Position</u>	<u>Optimum</u>			<u>Range</u>	
		<u>Amperage</u>	<u>WFS</u>	<u>Voltage</u>	<u>Amperage</u>	<u>Voltage</u>
.045"	Flat	180	400	27-28	125-200	25-30
	V-up/OH	140	300	26	120-165	25-27
1/16"	Flat	250	300	28	130-300	23-30
	V-up/OH	200	200	26	140-240	23-27

Use 1/2" Contact tip to work distance

* For CO₂ shielding increase voltage by 1.5 to 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.