

Select 2553-AP

Description:

Select 2553-AP is a flux cored, all position electrode with a nominal composition of 25 Cr-9.5 Ni-3.5 Mo-2 Cu-2.0 N. It is used to weld duplex stainless steels which contain approximately 25% chromium. This electrode has better resistance to intergranular corrosion, pitting and stress corrosion cracking than 2209. The recommended shielding gas is 75Ar/25CO₂.

Classification:

- E2553T1-4 per AWS A5.22, SFA 5.22

Characteristics:

Select 2553-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:

Select 2553-AP electrodes are suitable for welding similar materials in the chemical and fertilizer industries, and for many offshore applications including piping systems, pumps, valves and heat exchangers. The weld metal exhibits high strength with excellent corrosion resistance, especially to pitting attack from chlorides in sea water.

Typical Mechanical Properties (75% Ar-25% CO₂):

Ultimate Tensile Strength (psi)	124,000
Yield Strength (psi)	97,000
Percent Elongation	24

Typical Weld Deposit Chemistry (wt%):

Shielding Gas	C	Cr	Ni	Mo	Cu	Mn	Si	N
75Ar/25CO ₂	0.03	25.40	9.50	3.80	2.20	1.10	0.70	0.20
Ferrite Number (WRC, 1992) - 42								

Typical Welding Parameters (CO₂)*:

Diameter	WFS (ipm)	Amperage	Voltage	ESO (in.)	Dep. Rate (lbs/hr)
.045"	250	130	24	5/8-3/4	5.4
.045"	300	160	26	5/8-3/4	6.3
.045"	425	200	28	5/8-3/4	9.2
.045"	780	270	34	5/8-3/4	16.2
1/16"	150	170	25	3/4-1	5.4
1/16"	195	215	27	3/4-1	7.0
1/16"	240	250	28	3/4-1	8.6
1/16"	320	305	29	3/4-1	11.5

- 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.