SelectAlloy 625-AP

Nickel Alloy / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

FEATURES

- Designed for welding in all positions with excellent slag release in both 75-80% Ar/balance CO2 or 100% CO2 shielding gas
- Iron (Fe) is less than 1 wt% to further enhance corrosion resistance.
- Exceptional mechanical properties and low temperature ductility make this product suitable for welding 9% Ni-steels for cryogenic service.
- Can be used to clad the surface of carbon steels to impart superior corrosion resistance and for joining nickel based alloys to steel.
- Typically used in marine applications for corrosion resistance, for cladding heat exchange and reactor vessels, and for welding LNG storage and conveyance equipment.

CONFORMANCES

AWS A5.34	ENiCrMo3T1-1
	ENiCrMo3T1-4
ASME SFA 5.34	ENiCrMo3T1-1
	ENiCrMo3T1-4

DIAMETERS (in (mm))

0.045 (1.2), 1/16 (1.6)

POSITIONS

SHIELDING GAS

75-80% Ar + Balance CO2, 100% CO2
Flow Rate: 40 - 50 CFM

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY (WT%)

Shielding Gas	C	Cr	Cu	Fe	Mn	Mo	Nb + Ta	Ni	P	S	Si	Ti
100%CO2	0.02	21.40	<0.01	0.52	0.31	8.91	3.72	65.50	0.01	0.002	0.23	0.18
75%Ar / 25%CO2	0.02	21.60	<0.01	0.60	0.35	8.85	3.82	64.50	0.01	0.002	0.25	0.20

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ -320°F (-196°C) ft-lb (J)
100%CO2	111 (766)	66 (455)	26	As-Welded	-	49 (66)
75%Ar / 25%CO2	114 (786)	70 (483)	36	As-Welded	-	70 (95)

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RECOMMENDED WELDING PARAMETERS

Diameter in (mm)	Shielding Gas	Position	WFS* in/min (m/min)	Amps	Volts	CTWD* in (mm)
0.045 (1.2 mm)	75% Ar/25% CO2	All Positions	215 (5.5)	130	23	1/2 - 5/8 (13 - 16)
		All Positions	260 (6.6)	145	24.5	1/2 - 5/8 (13 - 16)
		All Positions	310 (7.9)	160	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	420 (10.7)	180	27.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	450 (11.4)	200	29	5/8 - 3/4 (16 - 19)
1/16 (1.6 mm)	75% Ar/25% CO2	All Positions	135 (3.4)	160	23	5/8 - 3/4 (16 - 19)
		All Positions	190 (4.8)	195	24.5	5/8 - 3/4 (16 - 19)
		All Positions	225 (5.7)	210	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	255 (6.5)	225	27.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	290 (7.4)	245	29	3/4 - 1 (19 - 25)

** WFS = Wire Feed Speed, CTWD = Contact Tip To Work Distance*

Parameters were established in 75% Ar/25% CO2. Raise by 1-1.5 volts when using 100% CO2.

APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
CWB A5.34/A5.34M	ENiCrMo3T1-4	M21 (75%Ar / 25%CO2)	0.045 (1.2)

PACKAGING [lbs [kgs]]

33 (15) Spools, 60 (27.2) Coils, 500 (226.8) Round Drum, 800 (362.9) Hex Drum, 900 (408.2) Hex Drum

**Some packaging options may not be available depending on diameter and product. Special package options may be available upon request.*

STORAGE AND HANDLING

All products should be stored in original packaging, in dry conditions and handled with care. For more information refer to our website.

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