Select 410NiMo-AP

Stainless Steel / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

FEATURES

- Modified to contain less chromium (Cr) and more nickel (Ni) to eliminate ferrite in the microstructure that improves mechanical properties.
- Designed for welding in all positions. Well washed beads can be achieved when manipulating the puddle in both 100% CO2 or 75-80% Ar/balance CO2 shielding gas
- Postweld heat treatment temperatures need to be closely monitored with this alloy type, as higher temperatures, i.e. 1150F, may result in rehardening due to untampered martensite in the microstructure after cooling to room temperature.
- Application for this alloy is generally used to weld CA6NM castings or similar materials found in the power generation industry, especially with turbine blades and vanes.

CONFORMANCES

AWS A5.22	E410NiMoT1-1
	E410NiMoT1-4
ASME SFA 5.22	E410NiMoT1-1
	E410NiMoT1-4

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	Mn	Mo	Ni	P	S	Si
100%CO2	0.02	11.80	0.03	0.31	0.50	4.55	0.011	0.006	0.36
75%Ar / 25%CO2	0.02	12.00	0.03	0.33	0.52	4.61	0.012	0.007	0.41

Bismuth is not intentionally added and levels are not known to be greater than 0.002 (WT%)

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp
100%CO2	130 (897)	117 (807)	19	PWHT	1125 for 1 Hr
75%Ar / 25%CO2	132 (910)	118 (814)	16	PWHT	1125 for 1 Hr

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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)	100% CO2	All Positions	200 (5.1)	145	23	1/2 - 5/8 (13 - 16)
		All Positions	235 (6.0)	160	24	1/2 - 5/8 (13 - 16)
		All Positions	300 (7.6)	185	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	375 (9.5)	215	27	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	440 (11.2)	235	29	5/8 - 3/4 (16 - 19)
1/16 (1.6 mm)	100% CO2	All Positions	125 (3.2)	165	23	5/8 - 3/4 (16 - 19)
		All Positions	150 (3.8)	195	24	5/8 - 3/4 (16 - 19)
		All Positions	185 (4.7)	225	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	265 (6.7)	280	27	3/4 - 1 (19 - 25)
		Flat & Horizontal	325 (8.3)	320	29	3/4 - 1 (19 - 25)

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

For 75-80%Ar-Balance CO2 shielding gas, decrease voltage by 1 to 1.5 volts

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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