



exocor™

Nickel BARE WIRE DATA SHEET executive 625

DESCRIPTION

Executive 625 is a nickel-chromium-molybdenum alloy used for GTAW, GMAW, and SAW and used in the welding of ASTM B443, B444, and B446 having UNS Number N06625.

The high alloy content of Executive 625 enables it to withstand highly corrosive environments. The combination of nickel and chromium provides the resistance to oxidizing conditions and the combination of nickel and molybdenum provides resistance to reducing conditions. The increased level of molybdenum offers excellent resistance to stress corrosion cracking, pitting, and crevice corrosion in most applications. Executive 625 is recommended for applications where the operating temperature ranges from cryogenic to 1000°F (540°C).

Executive 625 is a versatile filler metal that is used for welding of dissimilar joints between nickel-chrome-molybdenum alloys and stainless, carbon or low alloy steels. It is used extensively when welding various nickel alloys such as 9% nickel steel, Monel®, Inconel®, 385/904L, 254SMO, and AL-6XN.

Executive 625 is also widely used to maximize alloy performance in a single layer deposit to the iron content is restricted to 0.80 max to ensure the highest corrosion standard in overlaying applications. Refer to Executive 625 HWT for highly demanding automated applications.

TYPICAL CHEMICAL VALUES

C	Mn	Fe	P	S	Si	Cu	Ni	Al	Ti	Cr	Nb + Ta	Mo	TOE
0.10	0.50	1.0	0.02	0.015	0.50	0.50	58.0 min	0.40	0.40	20.0-23.0	3.15-4.15	8.0-10.0	<0.50

*single values shown are maximum percentages

WELDING PARAMETERS

PROCESS	SIZE	VOLTS	AMPS	SPEED OF WELDING / GAS FLOW	SHIELDING GAS / FLUX
SAW	.062	25 - 28	220 - 280	10 - 14 I.P.M	Record NiCrW / NiCrW 412
	.093	29 - 32	300 - 350	10 - 14 I.P.M	
GMAW	.035	29 - 33	160 - 180	30 to 50 CFH	75% Argon+25% Helium
	.045	29 - 33	180 - 220	30 to 50 CFH	or
	.062	29 - 33	210 - 250	30 to 50 CFH	50% Argon + 50% Helium
GTAW	.093	Direct Current; Electrode –		30 to 40 CFH	100% Argon

MECHANICAL PROPERTIES

Tensile Strength:	110,000 PSI minimum	760 MPA
Yield Strength:	85,000 PSI	590 MPA
Elongation:	25%	
Impact Strength at -196°C:	62 ft lbs	
Lateral Expansion:	44 Mils	

CLASSIFICATION

Wire chemistry has been optimized for best performance and conforms to **AWS/SFA 5.14, Class ERNiCrMo-3**, ISO 18274, Class SNI 6625.