



exocor™

Nickel BARE WIRE DATA SHEET executive 625 HWT

DESCRIPTION

Executive 625 HWT is a nickel-chrome-molybdenum used all the same applications as our standard Executive 625 with the added benefit of being optimized for Nickel-Chromium-Molybdenum welding with Hot Wire Tig and GMAW. Rod chemistry and the production process is tightly controlled resulting in a wire that provides ultra consistency and exceptional cleanliness. Both are strict requirements to produce high quality weldments with Hot Wire Tig. This filler metal may be used for high production cladding of process valves and components.

The high alloy content of 625 HWT 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 HWT is recommended for applications where the operating temperature ranges from cryogenic to 1000°F (540°C).

Executive 625 HWT 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®, 254SMO, and AL-6XN. The iron content is restricted to less than 1.00 max to ensure the highest corrosion standard in overlaying applications.

Executive 625 HWT is also widely used to maximize alloy performance in a single layer deposit. Product is available in 2-lb, 33-lb, 60-lb, and 250-lb **X-PAK**.

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
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.