

DESCRIPTION

Executive 312 wire is designed to provide clean and consistent welds with excellent feedability and minimal clean-up by maintaining tight control from the country of melt to the design of the spool.

Executive 312 work hardens to provide great wear resistance with high tensile strength and offers incredible versatility making it the filler of choice for hard to weld alloys.

APPLICATIONS & FEATURES

Executive 312 is ideal for welding tool steels, dissimilar metals, clad steels, stainless steel sheet lining, and hard-to-weld steel and high hardenability alloy steel. Executive 312 gives a two-phase weld deposit with substantial percentages of ferrite in an austenite matrix. Even with considerable dilution by austenite-forming elements such as nickel, the microstructure remains two-phase and highly resistant to weld metal cracks and fissures.

This wire is also suitable for laser welding and WAAM applications (Wire Arc Additive Manufacturing, aka Metal 3D printing).

TYPICAL WIRE CHEMISTRY & MECHANICAL PROPERTIES

C	Cr	Ni	Mo	Mn	Si	P	S	Cu	N
0.094	30.83	8.56	0.02	1.60	0.37	0.015	0.001	0.03	0.024

Tensile Strength:	107,300 PSI min	Yield Strength:	87,020 PSI min	Elongation:	25%
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TYPICAL WELDING PARAMETERS

Process	Diameter	Voltage	Amperage	Gas Flow	Shielding Gas / Flux	
GMAW - Short	.035"	21-22	160-200	30 to 50 CFH	90% He/7.5% Ar/2.5% CO ₂ or 1%-5% O ₂ /Balance Ar	
	.045"	22-23	180-210			
	.062"	23-24	200-220			
	- Spray	.035"	23-25			190-260
	.045"	25-28	250-330			
	.062"	28-31	310-350			
GTAW	.062" - .125"	Direct Current; Electrode -		30 to 40 CFH	100% Ar	
SAW	.093"	29-32	300-350		Record IND 24 or Record IN	
	.125"	29-32	400-550			

STANDARD PACKAGING

GMAW (MIG)	33-lb wire baskets	1,980-lb pallet
	11-lb plastic spools	11-lb box
	2-lb plastic spools	8-lb box
GTAW (TIG)	10-lb plastic tube	40-lb box
SAW	60-lb wire coil	1,200-lb pallet

CLASSIFICATION

AWS/SFA 5.9, Class **ER312**

