



DESCRIPTION

Executive 312 was originally designed to weld cast alloys of similar composition. It also has been found to be valuable in welding dissimilar metals such as carbon steel to stainless steel, particularly those grades high in nickel. This alloy 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 thus highly resistant to weld metal cracks and fissures. Executive 312 is used extensively for digester overlay field repairs, and can be offered on larger spools for increased efficiency.

TYPICAL CHEMICAL VALUES

C	Cr	Ni	Mo	Mn	Si	P	S	Cu
0.1	30.0	9.0	0.1	1.7	0.4	0.02	0.02	0.75

WELDING PARAMETERS

PROCESS	SIZE	VOLTS	AMPS	SPEED OF WELDING / GAS FLOW	SHIELDING GAS / FLUX
SAW	.093	29 - 32	300 - 350	20 - 30 IPM	Record IN Flux
	.125	29 - 32	400 - 550	20 - 30 IPM	Record IN Flux
	.156	29 - 32	500 - 650	20 - 30 IPM	Record IN Flux
GMAW	.035	29 - 33	160 - 180	30 - 50 CFH	98/99% Ar + 2/1% O ₂
	.045	29 - 33	180 - 220	30 - 50 CFH	or
	.062	29 - 33	210 - 250	30 - 50 CFH	97% Ar + 3% CO ₂
GTAW	.093	Direct Current; Electrode –		30 - 40 CFH	100% Ar

MECHANICAL PROPERTIES

Tensile Strength:	109,500 PSI	760 MPA
Yield Strength:	78,500 PSI	540 MPA
Elongation:	25%	

CLASSIFICATION

Wire chemistry has been optimized for best performance and conforms to **AWS/SFA 5.9, Class ER312**, ISO 14343A, Class 29 9 and ISO 14343B, Class SS312.

