



Stainless Steel BARE WIRE DATA SHEET

executive 630

DESCRIPTION

Executive 630 (17/4PH) has a composition designed primarily for welding ASTM A564 Type 630 and some other precipitation-hardening stainless steels. The composition is modified to prevent the formation of ferrite networks in the martensitic microstructure which have a deleterious effect on mechanical properties. Dependant on the application and weld size, the weld metal may be used as-welded; welded and precipitation hardened; or welded, solution annealed, and precipitation hardened.

Note: Mechanical properties listed below reflect utilization of a postweld heat treatment between 1875°F and 1925°F for one hour, followed by precipitation hardening between 1135°F and 1165°F for four hours.

TYPICAL CHEMICAL VALUES

C	Cr	Ni	Mo	Mn	Si	P	S	Cu	Nb+Ta
0.03	16.4	4.7	0.2	0.5	0.4	0.02	0.02	3.6	0.2

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:	150,000 PSI	1030 MPA
Yield Strength:	135,000 PSI	930 MPA
Elongation:	10%	

CLASSIFICATION

Wire chemistry has been optimized for best performance and conforms to **AWS/SFA 5.9, Class ER630**, and is certified by the Canadian Welding Bureau to AWS A5.9. ISO 14343B, Class SS630.