

### DESCRIPTION

Executive 630 has a composition designed primarily for welding 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. It is a martensitic stainless steel that is often selected for its high resistance to stress-corrosion cracking, its magnetic properties, and excellent corrosion resistance.

Executive 630 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 wire provides welders with the highest quality stainless bare wire.

### APPLICATIONS & FEATURES

Executive 630 is used in petrochemical applications, power generation equipment manufacturing, pulp and paper, and general manufacturing and fabrication.

Mechanical properties listed below reflect utilization of a post weld heat treatment between 1875°F (1023°C) and 1925°F (1051°C) for one hour, followed by precipitation hardening between 1135°F (612°C) and 1165°F (630°C) for four hours.

### TYPICAL WIRE CHEMISTRY & MECHANICAL PROPERTIES

C	Cr	Ni	Mo	Mn	Si	P	S	Cu	N	Nb
0.007	16.17	4.60	0.05	0.35	0.39	0.020	0.001	3.35	0.04	0.22

**Tensile Strength:** 143,500 PSI min  
**Yield Strength:** 123,300 PSI min

**Elongation:** 10%

### TYPICAL WELDING PARAMETERS

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

### STANDARD PACKAGING

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

### CLASSIFICATION

AWS/SFA 5.9, Class **ER630**  
Certified by the Canadian Welding Bureau (CWB) to AWS A5.9.

