

### DESCRIPTION

Executive 439TiCu is a copper coated stainless steel wire primarily used for the welding of automotive stainless steel exhaust systems and components. The coating technology creates a smooth and uniform copper layer on the wire surface that remarkably improves the weldability of the wire. This alloy, when properly welded, will retain the corrosion resistance and mechanical properties of the base metal in the weld deposit and heat-affected zone. The weld will be free of the martensite normally associated with conventional ferritic stainless steel welds.

It has excellent high temperature strength, good thermal fatigue, and is well suited for thin gauge material. Superior corrosion characteristics and resistance to cracking are major advantages of this alloy. This is an 18% Chrome alloy that is stabilized with titanium. ER439 provides improved oxidation and corrosion resistance over ER409 in similar applications.

### APPLICATIONS & FEATURES

Executive 439TiCu is used in environments with continued heat cycling such as exhaust and furnace manufacturing and maintenance. It has a wide operating range of welding conditions with less spatter.

Good wetting, flat bead shape, smooth appearance and less oxidation darkening of the bead. Improved contact tip and conduit lifetime and a better ductility of the weld. Executive 439TiCu retains the corrosion resistance and mechanical properties of the base metal in the weld deposit and heat-affected zone.

### TYPICAL WIRE CHEMISTRY & MECHANICAL PROPERTIES

C	Cr	Ni	Mo	Mn	Si	P	S	Cu	N	Ti	
0.015	17.73	0.42	0.03	0.69	0.71	0.018	0.0001	0.13	0.094	0.169	
<b>Tensile Strength:</b>								74,000 PSI min	<b>Elongation:</b>		41%

### TYPICAL WELDING PARAMETERS

Process	Diameter	Voltage	Amperage	Gas Flow	Shielding Gas / Flux	
<b>GMAW</b> - Short	.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			
	- Spray	.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 **ER439**

