

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, and 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

Tensile Strength: 74,000 PSI min

Elongation: 41%

TYPICAL WELDING PARAMETERS

Process	Diameter	Voltage	Amperage	Gas Flow	Shielding Gas / Flux
GMAW - Short - Spray	.035"	21-22	160-200	30 to 50 CFH	98% Ar / 2% O ₂
	.045"	22-23	180-210		
	.035"	23-25	190-260		90% Ar / 10% O ₂
	.045"	25-28	250-330		
GTAW	.093"	Direct Current; Electrode -		30 to 40 CFH	100% Ar
SAW	.093"	29-32	300-350		Record IN Flux
	.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 **ER439**

