GEN 413 Welding Wire and Rod

GEN 413 is used for welding 70-30, 80-20 and 90-10 copper nickel alloys. It can also be used for dissimilar joining applications such as copper-nickel alloys to nickel alloys. GEN 413 is occasionally used for overlay on carbon steel after applying a layer of ERNi-1.

CONFORMANCES

AWS A5.9/A5.7M	:	ERCuNi
ASME SFA-A5.7	:	ERCuNi
UNS	:	C71581

AWS CHEMICAL COMPOSITION *(TYPICAL)*

%Ni	%Cu	%Fe	%Pb	%Mn
29.0 – 32.0	Rem.	0.40 – 0.75	0.02 max	1.0 max
30.91	*67.2*	*0.55*	*0.005*	*0.78*

%Si	%P	%Ti	Total Others
0.25 max	0.02 max	0.20 – 0.50	0.50 max
0.025	*0.0015*	*0.40*	

TYPICAL WELD METAL MECHANICAL PROPERTIES

Tensile Strength	:	52,500 psi	362 MPa
Yield Strength	:	21,000 psi	145 MPa
Elongation (min.)	:	30 %	

TYPICAL WELDING PARAMETERS

Process	Diameter		Voltage	Amperage	Gas/Flux
TIG (GTAW)	1/16”	1.6 mm	14 – 18	90 – 130	100% Ar
	3/32”	2.4 mm	15 – 20	125 – 175	100% Ar
	1/8”	3.2 mm	15 – 20	150 – 220	
MIG (GMAW)	.035”	0.9 mm	26 – 29	150 – 190	98%Ar – 2%O_2
	.045”	1.1 mm	28 – 32	180 – 220	98%Ar – 2%O_2
Sub Arc (SAW)	.093”	2.4 mm	28 – 30	275 – 350	
	.125”	3.2 mm	29 – 32	350 – 450	

*All parameters are suggested as basic guidelines only and will vary depending on joint design, number of passes and other factors.

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED
BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.