

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.

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

The contents of this document are presented for informational purposes only and while every effort has been made to ensure their accuracy, they are not to be construed as guarantees, express or implied, regarding the products or services described herein or their use or applicability. The user must fully evaluate every process and application in all aspects.