

TECHALLOY® 413

Nickel ▪ AWS ERCuNi

KEY FEATURES

- This filler metal can be used for MIG overlay on steel after a first layer with Nickel 208
- Dissimilar welding applications include joining copper-nickel alloys to Nickel 200 or nickel-copper alloys
- Q2 Lot® -Certificate showing actual deposit composition available online

WELDING POSITIONS

All

CONFORMANCES

AWS A5.14M: 2011 ERCuNi
UNS C71580

TYPICAL APPLICATIONS

- Used for TIG and MIG and oxy-fuel welding of 70/30, 80/20 and 90/10 copper-nickel alloys

SHIELDING GAS

MIG 75% Ar / 25% He
TIG 100% Ar

DIAMETERS / PACKAGING

Diameter in (mm)	MIG 33 lb (15 kg) Steel Spool	TIG 10 lb (4.5 kg) Tube 30 lb (13.6 kg) Master Carton
0.035 (0.9)	MG413035667	
0.045 (1.1)	MG413045667	
1/16 (1.6)	MG413062667	TG413062638
3/32 (2.4)		TG413093638
1/8 (3.2)		TG413125638

WIRE COMPOSITION⁽¹⁾ - As Required per AWS A5.14M: 2011

	%Cu	%Mn	%Fe	%Si	%Ni
Requirements AWS ERCuNi	Remainder	1.0 max	0.40 - 0.75	0.25 max	29 - 32
Typical Performance⁽²⁾ Techalloy® 413	67.5	0.7	0.55	0.1	30
	%P	%Pb	%Ti	%Other	
Requirements AWS ERCuNi	0.02 max	0.02 max	0.20 - 0.50	0.50 max	
Typical Performance⁽²⁾ Techalloy® 413	0.006	0.003	0.25	<0.50	

TYPICAL OPERATING PROCEDURES

Process	Diameter in (mm)	Voltage (volts)	Amperage	Gas
MIG	0.035 (0.9)	25-29	150-190	75% Argon / 25% Helium
	0.045 (1.1)	25-28	180-240	
	1/16 (1.6)	29-33	200-250	

⁽¹⁾Typical all weld metal. ⁽²⁾See test results disclaimer on pg. 13.
Safety Data Sheets (SDS) are available on our website at www.lincolnelectric.com

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TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

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