

TECHALLOY® 4130

Low Alloy Steel

KEY FEATURES

- High strength, low alloy
- Preheat and inter-pass temperature of 400°F (204.4°C) is required

WELDING POSITIONS

All

TYPICAL APPLICATIONS

- Joining steels of similar chemical composition
- Overlays where moderate hardness is required

SHIELDING GAS

75% Ar/ 25%CO₂
98% Ar/ 2% O₂

DIAMETERS / PACKAGING

Diameter in (mm)	MIG 33 lb (15 kg) Steel Spool
0.035 (0.9)	MG4130035659
0.045 (1.1)	MG4130045659
1/16 (1.6)	MG4130062659

MECHANICAL PROPERTIES⁽⁴⁾

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %
Typical Results ⁽³⁾	900 (130)	1,000 (145)	11

WIRE COMPOSITION⁽¹⁾

	%C	%Mn	%Si	%Fe	%Cr	%Mo	%Ni	%V
Typical Results ⁽³⁾	0.31	0.52	0.28	Balance	0.93	0.20	-	-

TYPICAL OPERATING PROCEDURES

Process	Diameter in (mm)	Voltage (volts)	Amperage	Gas
MIG – Spray Transfer	0.035 (0.9)	26.5-31	180-250	98% Ar / 2% O ₂
	0.045 (1.1)	28-32	300-380	
	1/16 (1.6)	28-32	350-400	
MIG – Short Circuit Transfer	0.035 (0.9)	22-26	150-175	75% Ar / 2% CO ₂
	0.045 (1.1)	23-26	175-215	

⁽¹⁾Typical deposit composition. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer. ⁽⁴⁾Quenched from 1,550 F (843 C) in oil and tempered at 1,050° F (565° C). Safety Data Sheets (SDS) are available on our website at www.lincolnelectric.com

Safety Data Sheets (SDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

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.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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.