

Select 810-Ni2

Low Alloy / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

FEATURES

- Exhibits a spray-like arc transfer and low spatter.
- Intended for single and multiple pass welding, on carbon and low alloy steels requiring good charpy v-notch toughness at temperatures as low as -40F.
- Designed as a dual gas electrode, 100%CO₂ and 75-80% argon – balance CO₂.
- Typical steels welded with this electrode include ASTM A572, A302, A588, and A734.
- Select 810-Ni2 is ideal for applications such as offshore platform construction, shipbuilding, earthmoving and mining machinery.

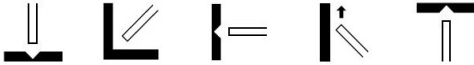
CONFORMANCES

MILITARY MIL-DTL-24403/1F	MIL-81T1-Ni2C
AWS A5.29	E81T1-Ni2C E81T1-Ni2M
ASME SFA 5.29	E81T1-Ni2C E81T1-Ni2M

DIAMETERS (in [mm])

0.045 (1.2), 0.052 (1.3), 1/16 (1.6), 5/64 (2.0)

POSITIONS



SHIELDING GAS

75-80% Ar/Balance CO₂, 100% CO₂

Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY (WT%)

Shielding Gas	C	Mn	Ni	P	S	Si
100%CO ₂	0.04	0.83	2.40	0.010	0.010	0.29
75%Ar / 25%CO ₂	0.05	0.90	2.40	0.010	0.010	0.30

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ -40°F (-40°C) ft-lb (J)
100%CO ₂	89 (614)	77 (531)	25	As-Welded	-	30 (41)
75%Ar / 25%CO ₂	91 (628)	82 (566)	24	As-Welded	-	40 (54)



Revision: 1/17/2025

Notice: Be sure to follow all your employers safety practices, policies and procedures when using this product. Refer to CSA W117.2 and ANSI Z49.1 Safety in Welding, Cutting and Allied Processes for further information and the manufactures SDS sheet. The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.

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RECOMMENDED WELDING PARAMETERS **

Diameter in (mm)	Shielding Gas	Position	WFS* in/min (m/min)	Amps	Volts	CTWD* in (mm)
0.045 (1.2 mm)	75% Ar/25% CO2	All Positions	200 (5.1)	145	22	1/2 - 5/8 (13 - 16)
		All Positions	235 (6.0)	160	23	1/2 - 5/8 (13 - 16)
		All Positions	300 (7.6)	185	25	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	375 (9.5)	215	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	440 (11.2)	235	28	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)	75% Ar/25% CO2	All Positions	170 (4.3)	155	22	5/8 - 3/4 (16 - 19)
		All Positions	200 (5.1)	175	23	5/8 - 3/4 (16 - 19)
		All Positions	250 (6.4)	225	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	310 (7.9)	250	26	3/4 - 1 (19 - 25)
		Flat & Horizontal	395 (10.0)	280	28	3/4 - 1 (19 - 25)
1/16 (1.6 mm)	75% Ar/25% CO2	All Positions	125 (3.2)	165	22	5/8 - 3/4 (16 - 19)
		All Positions	150 (3.8)	195	23	5/8 - 3/4 (16 - 19)
		All Positions	185 (4.7)	225	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	265 (6.7)	280	26	3/4 - 1 (19 - 25)
		Flat & Horizontal	325 (8.3)	320	28	3/4 - 1 (19 - 25)
5/64 (2.0 mm)	75% Ar/25% CO2	All Positions	100 (2.5)	195	22	3/4 (19)
		All Positions	110 (2.8)	210	23	3/4 (19)
		All Positions	130 (3.3)	240	25	3/4 (19)
		Flat & Horizontal	200 (5.1)	310	26	1 - 1 1/4 (25 - 32)
		Flat & Horizontal	225 (5.7)	350	28	1 - 1 1/4 (25 - 32)

* WFS = Wire Feed Speed, CTWD = Contact Tip To Work Distance

**The parameters listed are recommended starting points of operation and the ranges for amperage, wfs, and voltage could be extended based on fitness for application. For products with "all-position" capability, as determined and listed in classification, the position recommendation can be determined based on operator skill and material thickness and isn't limited to the listing.

APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
ABS	3YSA	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
		C1 (100%CO2)	0.035 (0.9) - 1/16 (1.6)

PACKAGING [lbs (kgs)]

33 (15) Spools, 60 (27.2) Coils, 500 (226.8) Round Drum, 800 (362.9) Hex Drum, 900 (408.2) Hex Drum

*Some packaging options may not be available depending on diameter and product. Special package options may be available upon request.

STORAGE AND HANDLING

All products should be stored in original packaging, in dry conditions and handled with care. For more information refer to our website.



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