

Select 81-Ni1

Low Alloy / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

FEATURES

- Produces a smooth, spray transfer with a thin, easily removed slag, and a smooth rippled bead profile.
- Superb choice for welding steels such as ASTM A572 Gr. 60, A302, A575, and A734
- Applications include mining machinery, offshore platforms, shipbuilding, and earthmoving equipment.

CONFORMANCES

AWS A5.29

E80T1-Ni1C-JH8

E80T1-Ni1M-JH8

AWS D1.8

3/32 in (2.4 mm), (100% CO₂)

DIAMETERS (in [mm])

1/16 (1.6), 5/64 (2.0), 3/32 (2.4)

POSITIONS



SHIELDING GAS

100% CO₂, 75-80% Ar / Balance CO₂

Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY (WT%)

Shielding Gas	C	Cr	Mn	Mo	Ni	P	S	Si	V
100%CO ₂	0.06	0.05	1.03	0.00	0.90	0.010	0.009	0.27	0.01
75%Ar / 25%CO ₂	0.07	0.05	1.40	0.00	1.02	0.010	0.010	0.48	0.02

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ -20°F (-30°C) ft-lb (J)	CVN @ -40°F (-40°C) ft-lb (J)
100%CO ₂	86 (592)	75 (514)	27.7	As-Welded	-	34 (46)	26 (35)
75%Ar / 25%CO ₂	93 (643)	83 (570)	21.7	As-Welded	-	40 (54)	33 (45)



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.

600 Enterprise Drive, P.O. Box 259, Fort Loramie, Ohio 45845-0259 • 800-341-5215 • www.Select-Arc.com

RECOMMENDED WELDING PARAMETERS **

Diameter in (mm)	Shielding Gas	Position	WFS* in/min (m/min)	Amps	Volts	CTWD* in (mm)
1/16 (1.6 mm)	100% CO2	Flat & Horizontal	235 (6.0)	245	24	3/4 (19)
		Flat & Horizontal	280 (7.1)	275	27	3/4 - 1 (19 - 25)
		Flat & Horizontal	325 (8.3)	320	29	3/4 - 1 (19 - 25)
5/64 (2.0 mm)	100% CO2	Flat & Horizontal	145 (3.7)	280	25	1 (25)
		Flat & Horizontal	190 (4.8)	320	27	1 - 1 1/4 (25 - 32)
		Flat & Horizontal	230 (5.8)	365	29	1 - 1 1/4 (25 - 32)
3/32 (2.4 mm)	100% CO2	Flat & Horizontal	120 (3.0)	275	25	1 1/4 (32)
		Flat & Horizontal	150 (3.8)	335	27	1 1/4 - 1 1/2 (32 - 38)
		Flat & Horizontal	165 (4.2)	400	29	1 1/4 - 1 1/2 (32 - 38)

* 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.

For Welding in 75-80% Ar / Balance CO2, decrease by 1 - 1.5 volts

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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