

Endurance

Carbon Steel / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

FEATURES

- This product is specially processed to produce an oxide-free surface, with no latent residues
- Current pickup and feeding characteristics are vastly improved over conventional metal cored wires
- Deposits weld metal with a tensile strength of 70 Ksi minimum
- Intended for use with shielding gas in the range of 75-95% Ar/Balance CO₂
- Exhibits 10-40% faster travel speeds than carbon steel solid wires
- Not as susceptible to lack of fusion on heavy sections as solid wires
- Ideal for structural welding, general fabrication, pipe welding, and welding on thin material

CONFORMANCES

AWS A5.18	E70C-6M
ASME SFA 5.18	E70C-6M
AWS A5.36	E70T15-M20A4-CS1 E70T15-M21A4-CS1

DIAMETERS [in (mm)]

0.045 (1.2), 0.052 (1.3), 1/16 (1.6)

POSITIONS



SHIELDING GAS

75-95% Ar/Balance CO₂

Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY [WT%]

Shielding Gas	C	Cr	Cu	Mn	Mo	Ni	P	S	Si	V
75%Ar / 25%CO ₂	0.06	0.03	0.06	1.30	0.01	0.34	0.010	0.010	0.50	0.01
95%Ar / 5%CO ₂	0.05	0.02	0.05	1.44	0.01	0.35	0.010	0.010	0.55	0.00

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)
75%Ar / 25%CO ₂	79 (545)	66 (455)	27	As-Welded	-	55 (75)	30 (41)
95%Ar / 5%CO ₂	87 (600)	76 (524)	25	As-Welded	-	50 (68)	25 (34)



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.

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	Flat & Horizontal	260 (6.6)	220	25	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	305 (7.7)	240	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	360 (9.1)	260	27.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	405 (10.3)	275	29	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)	75% Ar/25% CO2	Flat & Horizontal	235 (6.0)	235	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	315 (8.0)	275	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	330 (8.4)	295	27.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	345 (8.8)	305	29	3/4 - 1 (19 - 25)
1/16 (1.6 mm)	75% Ar/25% CO2	Flat & Horizontal	200 (5.1)	270	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	245 (6.2)	310	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	275 (7.0)	330	27.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	285 (7.2)	350	29	3/4 - 1 (19 - 25)

* 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.

At higher levels of Argon the voltage should be gradually decreased; 1/2-1 volt for 85%Ar/15% CO2, 1-1 1/2 volts for 90%Ar/10% CO2, and 1-2 volts for 95%Ar/5% CO2

APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
CWB CSA W48-23	E490T15-M21A4-CS1	M21 (75%Ar / 25%CO2)	0.045 (1.2) - 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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