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 CFM

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%CO2	0.06	0.03	0.06	1.30	0.01	0.34	0.010	0.010	0.50	0.01
95%Ar / 5%CO2	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%CO2	79 (545)	66 (455)	27	As-Welded	-	55 (75)	30 (41)
95%Ar / 5%CO2	87 (600)	76 (524)	25	As-Welded	-	50 (68)	25 (34)

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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	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*

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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