

Low Alloy / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

#### **FEATURES**

- Produces weld metal with improved low temperature toughness when compared to other electrodes of the
- Exhibits a spray-like arc transfer with very little spatter.
- Slag volume is moderate and removal is quite easy.
- Ideal for applications requireing 90,000 psi minimum tensile strength with good subzero CVN toughness values.
- Used to weld HY-80, HY-100, ASTM 710, A514, and other similar high strength steels.
- Utilized in the fabrication of naval vessels, offshore platforms/leg assmblies, earthmoving machinery, and specialized structural applications.

#### CONFORMANCES

**AWS A5.29** 

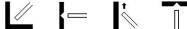
E91T1-K2CJH4 E91T1-K2MJH4

### **DIAMETERS** (in (mm))

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

#### **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	С	Cr	Mn	Мо	Ni	P	S	Si	V
100%CO2	0.05	0.03	1.5	0.00	1.9	0.010	0.010	0.21	0.02
75%Ar / 25%CO2	0.04	0.04	1.6	0.00	1.9	0.010	0.010	0.25	0.02

### **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)	CVN @ -76°F (-60°C) ft-lb (J)
100%CO2	94 (645)	87 (600)	22	As-Welded	-	65 (88)	46 (62)
75%Ar / 25%CO2	101 (697)	89 (614)	23	As-Welded	-	78 (106)	51 (69)



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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)		All-Position	200 (5.1)	145	24	1/2 - 5/8 (13 - 16)
		All-Position	235 (6.0)	160	25	1/2 - 5/8 (13 - 16)
	100% CO2	All-Position	300 (7.6)	185	27	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	375 (9.5)	215	28	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	440 (11.2)	235	29	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)		All-Position	170 (4.3)	155	24	5/8 - 3/4 (16 - 19)
		All-Position	200 (5.1)	175	25	5/8 - 3/4 (16 - 19)
	100% CO2	All-Position	250 (6.4)	225	27	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	310 (7.9)	250	28	3/4 - 1 (19 - 25)
		Flat & Horizontal	395 (10.0)	280	29	3/4 - 1 (19 - 25)
1/16 (1.6 mm)		All-Position	125 (3.2)	165	24	5/8 - 3/4 (16 - 19)
		All-Position	150 (3.8)	195	25	5/8 - 3/4 (16 - 19)
	100% CO2	All-Position	185 (4.7)	225	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	265 (6.7)	280	28	3/4 - 1 (19 - 25)
		Flat & Horizontal	325 (8.3)	320	29	3/4 - 1 (19 - 25)

For 75-80% Ar/balance CO2 decrease voltage by 1 to 1.5 volts.

#### **APPROVALS**

Agency	Approval	Shielding Gas	Diameter(s) in (mm)	
ABS	E91T1-GC	C1 (100%CO2)	0.045 (1.2) - 1/16 (1.6)	
CWB CSA W48-23	E621T1-C1A6-K2-H4 (E621T1-K2-H4)	C1 (100%CO2)	0.045 (1.2) - 1/16 (1.6)	
	E621T1-M21A6-K2-H4 (E621T1-K2M-JH4)	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

## **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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<sup>\*</sup> 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 "allposition" 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.

<sup>\*</sup>Some packaging options may not be available depending on diameter and product. Special package options may be available upon request.