

Select 721

Carbon Steel / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

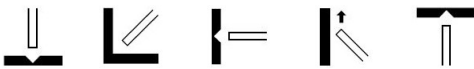
FEATURES

- Intended for single and multiple pass welding of carbon steels, such as ASTM A36, A131, and A285
- Higher argon blends offer lower fume generation rates than shielding with carbon dioxide
- Developed primarily for Naval shipbuilding applications

DIAMETERS (in [mm])

0.035 (0.9), 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)

CONFORMANCES

AWS A5.20

E71T-12M-JH4

E71T-1M-H4

E71T-9M-JH4

AWS A5.36

E71T1-M20A2-CS2-H4

E71T1-M20A4-CS2-H4

E71T1-M21A2-CS2-H4

E71T1-M21A4-CS2-H4

ASME SFA 5.20

E71T-12M-JH4

E71T-1M-JH4

E71T-9M-JH4

AWS D1.8

0.045 in (1.2 mm), (90% Ar/10% CO2)

0.052 in (1.3 mm), (90% Ar/10% CO2)

1/16 in (1.6 mm), (90% Ar/10% CO2)

TYPICAL WELD DEPOSIT CHEMISTRY (WT%)

Shielding Gas	C	Mn	Ni	P	S	Si
75%Ar / 25%CO2	0.05	1.22	0.42	0.011	0.009	0.31
85%Ar / 15%CO2	0.06	1.19	0.39	0.005	0.008	0.43
95%Ar / 5%CO2	0.06	1.28	0.40	0.005	0.007	0.46

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	87 (601)	77 (533)	28	As-Welded	-	65 (88)	40 (54)
85%Ar / 15%CO2	87 (602)	77 (530)	27	As-Welded	-	109 (148)	75 (102)
95%Ar / 5%CO2	92 (633)	81 (559)	27	As-Welded	-	101 (137)	78 (106)



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)
0.035 (0.9 mm)	75% Ar/25% CO2	All-Position	275 (7.0)	120	22	1/2 - 5/8 (13 - 16)
		All-Position	320 (8.1)	135	23	1/2 - 5/8 (13 - 16)
		All-Position	420 (10.7)	160	25	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	465 (11.8)	180	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	570 (14.5)	200	28	5/8 - 3/4 (16 - 19)
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)

* 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.

Welding parameters are for 75% Ar /25% CO2, at higher levels of argon the voltage should be gradually decreased: ½-1 volt for 85% Ar/15% CO2, 1-1 ½ volts for 90% Ar/10% CO2, and 1-2 volts for 95% Ar/5% CO2.

APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
ABS	3YSA	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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