

# Select 720HP

Carbon Steel / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

## FEATURES

- Designed for single & multiple pass welding of carbon steels, such as ASTM A36, A285, A515-Gr 70, & A516-Gr 70.
- Developed to weld with 100% CO2 and 75-80% Ar/balance CO2.
- The arc transfer is a small droplet spray with an argon blend and small to medium droplet with CO2.
- Microalloying and slag adjustments provide enhanced CVN toughness values at lower than required classification temperatures.
- Well suited for structural welding and general fabrication.
- A good choice for fine grained, high toughness steels, such as ASTM A572 and A633.
- Typical applications are mining machinery, draglines frames, railcar construction, and shipbuilding.

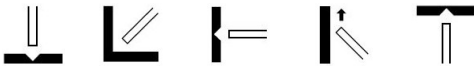
## CONFORMANCES

<b>AWS A5.36</b>	E71T12-C1A4-CS2-H8 E71T12-M21A5-CS2-H8
<b>AWS A5.20</b>	E71T-12C-JH8 E71T-12M-JH8 E71T-1C-JH8 E71T-1M-JH8 E71T-9C-JH8 E71T-9M-JH8
<b>ASME SFA 5.20</b>	E71T-12C-JH8 E71T-12M-JH8 E71T-1C-JH8 E71T-1M-JH8 E71T-9C-JH8 E71T-9M-JH8
<b>AWS A5.29</b>	E81T1-GM-H8
<b>AWS D1.8</b>	0.052 in (1.3 mm), (100% CO2)

## DIAMETERS (in [mm])

0.035 (0.9), 0.045 (1.2), 0.052 (1.3), 1/16 (1.6)

## POSITIONS



## SHIELDING GAS

75-80%Ar/Balance, 100% 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
100%CO2	0.06	0.05	0.05	1.30	0.01	0.39	0.009	0.009	0.42	0.02
75%Ar / 25%CO2	0.06	0.03	0.04	1.51	0.00	0.41	0.009	0.009	0.47	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)	CVN @ -50°F (-46°C) ft-lb (J)
100%CO2	82 (566)	67 (462)	28	As-Welded	-	95 (129)	70 (95)	37 (50)
75%Ar / 25%CO2	88 (607)	76 (524)	28	As-Welded	-	85 (115)	65 (88)	40 (54)



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 Positions	275 (7.0)	120	22	1/2 - 5/8 (13 - 16)
		All Positions	320 (8.1)	135	23	1/2 - 5/8 (13 - 16)
		All Positions	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	24	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	24	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.

For 100% CO2 shielding gas, increase voltage by 1 to 1.5 volts

## APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
ABS	3YSA	C1 (100%CO2)	0.035 (0.9) - 1/16 (1.6)
		M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
CWB CSA W48-23	E491T1-C1A4-CS2-H4	C1 (100%CO2)	0.045 (1.2) - 1/16 (1.6)
	E491T1-M21A4-CS2-H4	M21 (75%Ar / 25%CO2)	0.045 (1.2) - 1/16 (1.6)
	E491T1-GA4-CS2-H4	G (Gas Mixture*)	0.045 (1.2) - 1/16 (1.6)
DNV	III YMS (H10) (C1)	C1 (100%CO2)	0.035 (0.9) - 5/64 (2.0)
	IV YMS (H10) (M21)	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
LLOYDS	4YS (H10)	M21 (75%Ar / 25%CO2)	0.045 (1.2) - 1/16 (1.6)

\* G - Gas mixtures containing components not listed, or mixtures outside the composition range listed in AWS A5.32 (ISO 14175). Two gas mixtures with the same G - classification may not be interchangeable. For more details see approval website or contact Select-SAI.



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## **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.



Revision: 1/17/2025

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600 Enterprise Drive, P.O. Box 259, Fort Loramie, Ohio 45845-0259 • 877-869-4009 • [www.Select-SAI.com](http://www.Select-SAI.com)