

# 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% CO<sub>2</sub> and 75-80% Ar/balance CO<sub>2</sub>.
- The arc transfer is a small droplet spray with an argon blend and small to medium droplet with CO<sub>2</sub>.
- 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.

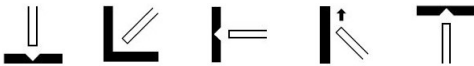
## CONFORMANCES

<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% CO <sub>2</sub> )

## 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% CO<sub>2</sub>

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
100%CO <sub>2</sub>	0.06	0.05	0.05	1.30	0.01	0.39	0.009	0.009	0.42	0.02
75%Ar / 25%CO <sub>2</sub>	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%CO <sub>2</sub>	82 (566)	67 (462)	28	As-Welded	-	95 (129)	70 (95)	37 (50)
75%Ar / 25%CO <sub>2</sub>	88 (607)	76 (524)	28	As-Welded	-	85 (115)	65 (88)	40 (54)



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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

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.

## 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.



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## **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: 9/16/2022

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