



Standards

CSA W48, Class E491T-9-H4, E491T-9M-H4
 AWS A5.20/ASME SFA 5.20, Class E71T-9C-H4/ E71T-9M-H4
 AWS A5.36M/ASME SFA 5.36M, Class E491T1-C1A3-CS1-H4,
 E491T1-GA3-CS1-H4, E491T1-M20A3-CS1-H4, E491T1-M21A3-CS1-H4
 Lloyd's, Grading DXVuO, BF, 3YS (75Ar/25CO₂ and CO₂)
 DNV, Grading III YMS (CO₂)

Description & Applications

- A general-purpose single-or multi-pass, all position flux-cored wire designed to weld carbon steels with mechanical properties down to -30°C (-20°F) when using CO₂ or Ar/CO₂ and ARCAL™ 211 shielding gases.
- Typical applications include shipbuilding, offshore and structural applications.
- Ideal for welding steel grades ASTM A36, A515 Gr. 70, A516 Gr. 70 and other fine grain steels.

The BLUESHIELD™ Advantage

- Smooth spray arc transfer and quick freezing slag.
- Low fume emission.
- Smooth spray transfer and negligible spatter.
- Excellent toughness at low temperatures.

Typical Welding Parameters*

- Use DC electrode positive (DC+).



DIAMETER		POSITION	DCEP Amps	VOLTS	WIRE FEED SPEED (WFS) m/min (in/min)	ELECTRODE EXTENSION mm (in)
mm	in					
0.9	0.035	All-Position	120	23	7.0 (275)	12.7-16 (1/2-5/8)
		All-Position	135	24	8.1 (320)	12.7-16 (1/2-5/8)
		All-Position	160	26	10.7 (420)	12.7-16 (1/2-5/8)
		Flat & Horizontal	180	27	11.8 (465)	16-19.1 (5/8-3/4)
		Flat & Horizontal	200	29	14.5 (570)	16-19.1 (5/8-3/4)
1.2	0.045	All-Position	145	23	5.1 (200)	12.7-16 (1/2-5/8)
		All-Position	160	24	6.0 (235)	12.7-16 (1/2-5/8)
		All-Position	185	26	7.6 (300)	12.7-16 (1/2-5/8)
		Flat & Horizontal	215	27	9.5 (375)	16-19.1 (5/8-3/4)
		Flat & Horizontal	235	29	11.2 (440)	16-19.1 (5/8-3/4)
1.3	0.052	All-Position	155	23	4.3 (170)	16-19.1 (5/8-3/4)
		All-Position	175	24	5.1 (200)	16-19.1 (5/8-3/4)
		All-Position	225	26	6.4 (250)	16-19.1 (5/8-3/4)
		Flat & Horizontal	250	27	7.9 (310)	19.1-25.4 (3/4-1)
		Flat & Horizontal	280	29	10.0 (395)	19.1-25.4 (3/4-1)
1.6	1/16	All-Position	165	23	3.2 (125)	16-19.1 (5/8-3/4)
		All-Position	195	24	3.8 (150)	16-19.1 (5/8-3/4)
		All-Position	225	26	4.7 (185)	16-19.1 (5/8-3/4)
		Flat & Horizontal	280	27	6.7 (265)	19.1-25.4 (3/4-1)
		Flat & Horizontal	320	29	8.3 (325)	19.1-25.4 (3/4-1)

*Parameters in table based on 100% CO₂

For Ar / CO₂, shielding gas blends decrease the Voltage 1-1.5 Volts or increase the WFS 10-15% using the same voltage settings in the table.



Recommended Shielding Gases

100% CO₂, BLUESHIELD™ 7, BLUESHIELD™ 8 and ARCAL™ 211 are recommended.

Typical Chemistry

WEIGHT %	C	Mn	P	S	Si
CO ₂	0.05	1.34	0.010	0.013	0.43
BLUESHIELD™ 8	0.05	1.60	0.010	0.013	0.54
ARCAL™ 211	0.05	1.61	0.013	0.010	0.57

Typical Mechanical Properties*

	AS WELDED		
	CO ₂	BLUESHIELD™ 8	ARCAL™ 211
TENSILE STRENGTH MPa (ksi)	572 (83)	627 (91)	642 (93)
YIELD STRENGTH MPa (ksi)	489 (71)	544 (79)	575 (83)
ELONGATION (%)	30	28	24
IMPACT (Charpy V-notch) @ -30°C (-20°F)	84 J (62 ft-lb)	96 J (71 ft-lb)	88 J (65 ft-lb)

* Actual welding positions and procedures can impact results.

Packaging

DIAMETER		PACKAGING			ITEM NUMBER
mm	in	kg	lb		
0.9	0.035	15	33	Spool	A0417447
1.2	0.045				A0417425
1.3	0.052				A0417428
1.6	1/16				A0417430
2.0	5/64				A0899034
1.2	0.045	27.2	60	Coil	A0417427
1.3	0.052				A0417429
1.6	1/16				A0417431
2.0	5/64				A0899035
1.2	0.045	226.8	500	Drum	A0417426
1.3	0.052				A0917715
1.6	1/16				A0417444
1.2	0.045	340.2	750	Hex Drum	A0902323

FCM