

Dual Shield 710X

Dual Shield 710X is an all-position flux cored wire for general purpose welding. It provides outstanding operator appeal with an easily controlled arc, improved operation at both lower and higher current levels, minimal spatter and easily removed slag. Dual Shield 710X can be used with either 100% CO₂ or a 75/25 Argon CO₂ gas mix, however pure CO₂ is recommended in applications where weld joint restraint is high. ~Applications include rail car, barges, civil construction, light equipment and general fabrication.~

Classifications	ASME SFA 5.36 ASME SFA 5.20 AWS A5.36: E71T1-C1A2-CS1-DH8 AWS A5.20: E71T-1C-DH8/T-9C-DH8
Approvals	LR DNV-GL CWB CSA W48 E491T-9-H8 ABS Seismic Certified "D"
Industry	Barges Civil Construction Industrial and General Fabrication Railcars Ship/Barge Building Light Equipment

Approvals are based on factory location. Please contact ESAB for more information.

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
75% Ar - 25% CO₂			
As Welded	570 MPa	640 MPa	27 %
100% CO₂			
As Welded	520 MPa	625 MPa	28 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature
75% Ar - 25% CO₂	
As Welded	-18 °C
As Welded	-29 °C
100% CO₂	
As Welded	-18 °C
As Welded	-29 °C

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni
0.03	1.4	0.5	0.009	0.007	0.4

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate	Efficiency %
100% CO₂					
1.2 mm (.045 in.)	140 A	23 V	483 cm/min (190 in./min)	1.5 kg/h (3.3 lb/h)	81 %
1.2 mm (.045 in.)	154 A	23 V	559 cm/min (220 in./min)	1.77 kg/h (3.9 lb/h)	81 %
1.2 mm (.045 in.)	167 A	24 V	635 cm/min (250 in./min)	2.04 kg/h (4.5 lb/h)	82 %
1.2 mm (.045 in.)	180 A	24 V	711 cm/min (280 in./min)	2.31 kg/h (5.1 lb/h)	82 %
1.2 mm (.045 in.)	193 A	25 V	787 cm/min (310 in./min)	2.54 kg/h (5.6 lb/h)	82 %
1.2 mm (.045 in.)	205 A	26 V	864 cm/min (340 in./min)	2.81 kg/h (6.2 lb/h)	83 %
1.2 mm (.045 in.)	217 A	26 V	940 cm/min (370 in./min)	3.08 kg/h (6.8 lb/h)	83 %
1.4 mm (.052 in.)	153 A	24 V	406 cm/min (160 in./min)	1.81 kg/h (4.0 lb/h)	81 %

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Deposition Data					
Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate	Efficiency %
1.4 mm (.052 in.)	159 A	24 V	432 cm/min (170 in./min)	1.81 kg/h (4.0 lb/h)	81 %
1.4 mm (.052 in.)	166 A	25 V	457 cm/min (180 in./min)	2.04 kg/h (4.5 lb/h)	81 %
1.4 mm (.052 in.)	172 A	25 V	483 cm/min (190 in./min)	2.17 kg/h (4.8 lb/h)	81 %
1.4 mm (.052 in.)	178 A	25 V	508 cm/min (200 in./min)	2.27 kg/h (5.0 lb/h)	81 %
1.4 mm (.052 in.)	184 A	25 V	533 cm/min (210 in./min)	2.4 kg/h (5.3 lb/h)	81 %
1.4 mm (.052 in.)	190 A	26 V	559 cm/min (220 in./min)	2.5 kg/h (5.5 lb/h)	81 %
1.4 mm (.052 in.)	196 A	26 V	584 cm/min (230 in./min)	2.63 kg/h (5.8 lb/h)	82 %
1.4 mm (.052 in.)	201 A	26 V	610 cm/min (240 in./min)	2.72 kg/h (6.0 lb/h)	82 %
1.4 mm (.052 in.)	207 A	26 V	635 cm/min (250 in./min)	2.86 kg/h (6.3 lb/h)	82 %
1.6 mm (1/16 in.)	187 A	24 V	356 cm/min (140 in./min)	1.9 kg/h (4.2 lb/h)	80 %
1.6 mm (1/16 in.)	205 A	25 V	406 cm/min (160 in./min)	2.22 kg/h (4.9 lb/h)	80 %
1.6 mm (1/16 in.)	223 A	25 V	457 cm/min (180 in./min)	2.54 kg/h (5.6 lb/h)	80 %
1.6 mm (1/16 in.)	240 A	25 V	508 cm/min (200 in./min)	2.86 kg/h (6.3 lb/h)	80 %
1.6 mm (1/16 in.)	257 A	26 V	559 cm/min (220 in./min)	3.2 kg/h (7.0 lb/h)	81 %
1.6 mm (1/16 in.)	273 A	26 V	610 cm/min (240 in./min)	3.5 kg/h (7.7 lb/h)	81 %
1.6 mm (1/16 in.)	289 A	26 V	(260 ipm in./min)	3.8 kg/h (8.4 lb/h)	81 %

Recommended Welding Parameters				
Wire Diameter	Current	Voltage	TTW Dist.	Wire Feed Speed
100% CO₂				
1.6 mm	290-415 A	28-32 V	25.4-31.75 mm	1016-1270 cm/min
1.6 mm	245-345 A	27-30 V	19-25.4 mm	673-1016 cm/min
1.6 mm	165-270 A	25-28 V	15.8-19 mm	343-673 cm/min
1.4 mm	250-350 A	29-31 V	19-25.4 mm	1016-1524 cm/min
1.4 mm	215-290 A	25-29 V	15.8-19 mm	711-1016 cm/min
1.4 mm	125-235 A	23-26 V	12.7-15.8 mm	330-711 cm/min
1.2 mm	180-265 A	26-30 V	19-25.4 mm	889-1397 cm/min
1.2 mm	175-230 A	25-27 V	12.7-19 mm	737-889 cm/min
1.2 mm	135-205 A	23-26 V	9.5-12.7 mm	432-737 cm/min
75% Ar - 25% CO₂				
1.6 mm	285-400 A	28-32 V	25.4-31.75 mm	813-1168 cm/min
1.6 mm	250-340 A	27-30 V	19-25.4 mm	610-813 cm/min
1.6 mm	185-285 A	24-28 V	15.8-19 mm	356-610 cm/min
1.4 mm	245-355 A	245-355 V	19-25.4 mm	940-1372 cm/min
1.4 mm	225-295 A	27-30 V	15.8-19 mm	686-940 cm/min
1.4 mm	135-250 A	24-28 V	12.7-15.8 mm	317.5-686 cm/min
1.2 mm	185-265 A	27-29 V	19-25.4 mm	775-1194 cm/min
1.2 mm	165-225 A	24-27 V	12.7-19 mm	240-305 cm/min
1.2 mm	130-200 A	22-26 V	9.5-12.7 mm	356-610 cm/min