

## Dual Shield II 712X H4

Dual Shield II 712X H4 is an all position flux cored wire intended for applications requiring outstanding weld metal toughness. This X-Series wire in combination with 75% Argon/25% CO<sub>2</sub> shielding gas, provides a smooth arc, and low spatter levels characteristic of Dual Shield flux cored wires.

Dual Shield II 712X H4 applications include off-shore oil components, shipbuilding and heavy equipment where exceptional Charpy impact/low temperature toughness is required.

<b>Classifications</b>	AWS A5.20 : E71T-12M-JH4 AWS A5.36 : E81T1-M21A4-CS2-H4 AWS A5.26 : E81T1-GM-H4 ASME SFA 5.29 ASME SFA 5.36 ASME SFA 5.20
<b>Approvals</b>	CWB E491T1-M21A5-CS2-H4 CWB CSA E491T-12MJ-H4

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

### Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
As Welded	561 MPa (81 ksi)	616 MPa (89 ksi)	28 %

### Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
As Welded	-51 °C (-60 °F)	96 J (71 ft-lb)
As Welded	-29 °C (-20 °F)	193 J (142 ft-lb)
As Welded	-40 °C (-40 °F)	184 J (136 ft-lb)

### Typical Weld Metal Analysis %

C	Mn	Si	S	P	Cr
0.04	1.17	0.37	0.005	0.009	0.04

### Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate	Deposition Efficiency %
<b>75% Ar - 25% CO<sub>2</sub></b>					
1.2 mm (.045 in.)	265 A	28 V	1194 cm/min (470 in./min)	4.3 kg/h (9.5 lb/h)	86 %
1.2 mm (.045 in.)	200 A	26 V	787 cm/min (310 in./min)	2.8 kg/h (6.1 lb/h)	85 %
1.2 mm (.045 in.)	130 A	23 V	356 cm/min (140 in./min)	1.2 kg/h (2.6 lb/h)	81 %
1.4 mm (.052 in.)	330 A	29 V	1257 cm/min (495 in./min)	5.4 kg/h (12.0 lb/h)	86 %
1.4 mm (.052 in.)	260 A	28 V	838 cm/min (330 in./min)	3.7 kg/h (8.1 lb/h)	86 %
1.4 mm (.052 in.)	135 A	24 V	318 cm/min (125 in./min)	1.4 kg/h (3.0 lb/h)	83 %

### Recommended Welding Parameters

Wire Diameter	Condition	Condition	Condition	Condition
<b>75% Ar - 25% CO<sub>2</sub></b>				
1.4 mm (.052 in.)	245-255 A	29-31 V	19-25 mm (3/4-1 in.)	963-1257 cm/min (379-495 in./min)
1.4 mm (.052 in.)	225-295 A	27-30 V	16-19 mm (5/8-3/4 in.)	686-940 cm/min (270-370 in./min)
1.4 mm (.052 in.)	135-250 A	24-28 V	13-16 mm (1/2-5/8 in.)	318-686 cm/min (125-270 in./min)
1.2 mm (.045 in.)	185-265 A	27-29 V	19-25 mm (3/4-1 in.)	775-1194 cm/min (305-470 in./min)
1.2 mm (.045 in.)	165-225 A	24-27 V	13-19 mm (1/2-3/4 in.)	610-775 cm/min (240-305 in./min)
1.2 mm (.045 in.)	130-200 A	23-26 V	10-13 mm (3/8-1/2 in.)	356-610 cm/min (140-240 in./min)