

## Dual Shield II 71 Ultra

Dual Shield II 71 Ultra is an all-position flux cored wire that displays exceptional impact properties when used with CO<sub>2</sub>. The improved properties qualify this wire to the Navy's "HY" classification. The "Ultra" series produces smoother arc characteristics and lower welding fumes. Dual Shield II 71 Ultra was developed to join low and medium carbon steel. The Military classification allows Dual Shield II 71 Ultra to be used for attaching steels of less than 80 ksi (552 MPa) yield to HY-80 and HY-100. Commercial applications include construction, shipbuilding, railcar, and heavy equipment industries. Weld metal analysis is similar to an E7018 low hydrogen electrode.

### Specifications

<b>Classifications</b>	SFA/AWS A5.20 : E71T-1CJ-H8/T-9CJ-H8/12CJ-H8
<b>Approvals</b>	ABS : 3Y400SA(H10) CWB : E491T1-C1A4-CS2-H8 DNV-GL : IIIY40MS(H10) LR : 3Y40S H10
<b>Industry</b>	Ship/Barge Building Civil Construction Railcars Mobile Equipment Industrial and General Fabrication Bridge Construction

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

<b>Welding Current</b>	DC+
<b>Alloy Type</b>	C Mn

### Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
<b>C1</b>			
As Welded	495 MPa ( 72 ksi )	540 MPa ( 78 ksi )	28 %

### Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
<b>C1</b>		
Stress Relieved	-40 °C ( -40 °F )	84 J ( 62 ft-lb )
As Welded	-29 °C ( -20 °F )	83 J ( 61 ft-lb )
As Welded	-40 °C ( -40 °F )	56 J ( 41 ft-lb )

### Typical Weld Metal Analysis %

C	Mn	Si	S	P
<b>C1</b>				
0.03	1.40	0.40	0.010	0.012

### Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	TTW Dist.	Deposition Rate
1.2 mm ( 0.045 in. )	135-265 A	22-30 V	3.81-13.21 m/min ( 150-520 in./min )	( 0.4, in. )	1.1-4.6 kg/h ( 2.4-10. lbs/h )
1.4 mm ( 0.052 in. )	125-350 A	23-31 V	2.79-11.94 m/min ( 110-470 in./min )	13.0 mm ( 0.5, in. )	1.1-5.6 kg/h ( 2.4-12. lbs/h )
1.6 mm ( 1/16 in. )	165-415 A	25-32 V	2.79-10.67 m/min ( 110-420 in./min )	16.0 mm ( 0.6, in. )	1.9-7.0 kg/h ( 4.2-15. lbs/h )

### Recommended Welding Parameters

Current	Wire Diameter	Voltage
110-185 A	0.9 mm ( 0.035 in. )	23-30 V