

## Dual Shield T-75

Dual Shield T-75 is a flux cored wire with a basic slag system designed for multiple pass welding and produces excellent properties in both the as welded and stress relieved conditions. The exceptional impact toughness and low sensitivity to cracking makes it an ideal choice for a variety of low and medium carbon steels. The arc characteristics are globular, but can be improved with argon gas mixtures. The weld metal analysis is similar to an E7018 low hydrogen electrode.

<b>Classifications</b>	AWS A5.20 : E70T-5C-JH4/T-5M-JH AWS A5.36 : E70T5-C1A4-CS1-H4 AWS A5.36 : E70T5-M21-CS1-H4 ASME SFA 5.36 ASME SFA 5.20
<b>Approvals</b>	ABS DNV-GL (3/32") LR QPL-24403/1 MIL-70T-5C (3/32")
<b>Industry</b>	Civil Construction Industrial and General Fabrication Mobile Equipment Railcars

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

### Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Reduction in Area	Elongation
<b>75% Ar - 25% CO<sub>2</sub></b>				
As Welded	505 MPa (73 ksi)	595 MPa (86 ksi)	66 %	29 %
<b>100% CO<sub>2</sub></b>				
As Welded	495 MPa (72 ksi)	565 MPa (82 ksi)	65 %	28 %

### Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
<b>75% Ar - 25% CO<sub>2</sub></b>		
As Welded	-40 °C (-40 °F)	75 J (55 ft-lb)
<b>100% CO<sub>2</sub></b>		
As Welded	-40 °C (-40 °F)	95 J (70 ft-lb)

### Typical Weld Metal Analysis %

C	Mn	Si	S	P
0.04	1.50	0.60	0.010	0.006

### Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate	TTW Dist.	Deposition Efficiency %
<b>100% CO<sub>2</sub></b>						
2.4 mm (3/32 in.)	450 A	32 V	551 cm/min (217 in./min)	8.0 kg/h (17.6 lb/h)	25.4 mm (1 in.)	85 %
2.4 mm (3/32 in.)	475 A	32 V	622 cm/min (245 in./min)	9.1 kg/h (20 lb/h)	25.4 mm (1 in.)	87 %
2.4 mm (3/32 in.)	500 A	32 V	686 cm/min (270 in./min)	10.3 kg/h (22.8 lb/h)	25.4 mm (1 in.)	89 %

### Recommended Welding Parameters

Wire Diameter	Current	Voltage	TTW Dist.	Wire Feed Speed
<b>75% Ar - 25% CO<sub>2</sub></b>				
1.2 mm (.045 in.)	140-190 A	19-28 V	19-25.4 mm (3/4-1 in.)	635-889 cm/min (250-350 in./min)
1.2 mm (.045 in.)	240-265 A	29-30 V	19-25.4 mm (3/4-1 in.)	1143-1397 cm/min (450-550 in./min)
1.2 mm (.045 in.)	300 A	32 V	19-25.4 mm (3/4-1 in.)	1651 cm/min (650 in./min)
1.6 mm (1/16 in.)	220-280 A	29-30 V	19-25.4 mm (3/4-1 in.)	457-635 cm/min (180-250 in./min)



## Dual Shield T-75

### Recommended Welding Parameters

Wire Diameter	Current	Voltage	TTW Dist.	Wire Feed Speed
1.6 mm (1/16 in.)	280-380 A	31-32 V	25.4-31.75 mm (1-1.25 in.)	635-1016 cm/min (250-400 in./min)
2.4 mm (3/32 in.)	240-370 A	30-32 V	25.4-31.75 mm (1-1.25 in.)	254-508 cm/min (100-200 in./min)
2.4 mm (3/32 in.)	370-460 A	32-33 V	31.75-38 mm (1.25-1.5 in.)	508-813 cm/min (200-320 in./min)