

Dual Shield 7100 Ultra

FCAW wire for mild steel and 490N/mm² class high tensile steel. Dual Shield 7100Ultra is a multi-purpose all position flux cored wire for use with CO₂ or CO₂ /Ar mixed gas.

Specifications

Classifications	SFA/AWS A5.20 : E71T-1C SFA/AWS A5.20 : E71T-1CH8 SFA/AWS A5.20 : E71T-9C SFA/AWS A5.20 : E71T-9CH8 SFA/AWS A5.20 : E71T-9M SFA/AWS A5.20 : E71T-1M JIS Z 3313 : YFW-C502R/YFL-C503R KS D 7104 : YFW-C502R/YFL-C503R EN ISO 17632-A : T46 2 P C1 1 H10 EN ISO 17632-A : T46 2 P M21 1 H10
Approvals	ABS : 3YSA H10 BV : SA3YM (C1) BV : SA3YM HH CE : EN 13479 CWB : E491T1-C1A3-CS1-H8 CWB : E491T1-M21A3-CS1-H8 DNV-GL : III YMS LR : 3YS H10 (C1) UKCA : EN 13479 VdTÜV : 06616 ABS : 3Y400SA(H10) BV : SA3YM HH CCS : 3SH10, 3YSH10 (C1) ClassNK : KSW53G(C & M2) H10 KR : 3YSG(C)H10 LR : 3Y40S H10 (M21) LR : 3YS H10 (M21) RS : 3YS H10

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

Welding Current	DC+
Alloy Type	C Mn
Shielding Gas	M21, C1 (EN ISO 14175)

Tensile Properties

Testing Condition	Yield Strength	Tensile Strength	Elongation
AWS			
As Welded	580 MPa (84 ksi)	620 MPa (90 ksi)	26 %
As Welded	495 MPa (72 ksi)	561 MPa (81 ksi)	31 %

Charpy Testing

Testing Condition	Testing Temp	Impact Value
AWS		
As Welded	-20 °C (-4 °F)	84 J (62 ft-lb)
As Welded	-30 °C (-22 °F)	55 J (41 ft-lb)
As Welded	-20 °C (-4 °F)	90 J (67 ft-lb)

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Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
C1									
0.038	1.305	0.546	0.007	0.013	0.022	0.029	0.003	0.019	0.016

Typical Weld Metal Analysis %

Nb									
C1									
0.013									

Deposition Data

Diameter	Amps	Volts	Wire Feed Speed	TTW Dist	Deposition Rate
0.9 mm (0.035 in.)	90-170 A	23-30 V	5.59-13.97 m/min (220-550 in./min)	(0.4, in.)	1.1-2.9 kg/h (2.4-6.4 lbs/h)
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)

Welding_Parameters

Amps	Wire Diameter	Volts	Wire Feed Speed
130-265 A	1.2 mm (0.045 in.)	22-29 V	3.8-13.2 m/min (150-520 in./min)
135-355 A	1.4 mm (0.052 in.)	22-31 V	2.79-11.94 m/min (110-470 in./min)
185-400 A	1.6 mm (1/16 in.)	24-32 V	2.79-10.67 m/min (110-420 in./min)