SF-71 eco

Flux cored wire for mild & 490MPa high tensile steel

Introduction

SF-71 eco is a multi-purpose AWS E71T-1C flux cored wire for manual and semiautomatic applications. Its fast-freezing slag and high deposition rates ensure exceptional productivity in all positions, including vertical-up welding.

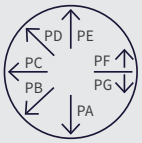
Designed specifically for all-position welding with C1 100% CO_2 shielding gas, SF-71 eco delivers a smooth, stable arc with minimal spatter for superior performance. It is widely used in industries including shipbuilding, structural fabrication, general fabrication, and pressure vessels.

Specifications

- **AWS** **A5.20 E71T-1C**
- **EN ISO** **17632-A T42 2 P C1 1**

Welding Position

- **All position welding**



Approvals

Shielding gas	Welding Position	Register of shipping & Size mm(in)
C1 (100% CO_2)	All	CE, TUV, LR, BV, BKI

Mechanical Properties of All Weld Metal

Item	Tensile Test			CVN Impact Value	
	YS MPa(lbs/in²)	TS MPa(lbs/in²)	EL (%)	Temp °C(°F)	Avg. J(ft-lbs)
1.2mm (0.045in)	545 (79,000)	572 (83,000)	28.0	-20 (0)	70 (51)
1.4mm (0.052in)	547 (79,000)	575 (83,000)	27.5	-20 (0)	70 (51)
1.6mm (1/16in)	552 (80,000)	580 (84,000)	27.0	-20 (0)	70 (51)
AWS A5.20 E71T-1C	≥ 390 (58,000)	≥ 490-670 (70,000-95,000)	≥ 22	Avg. ≥ 27J at -20°C	

Consumable : SF-71 eco Shielding gas : C1 (100% CO_2) Welding Position : 1G(PA)

Chemical Composition of All Weld Metal

Item	Chemical Composition (wt%)				
	C	Si	Mn	P	S
SF-71 eco	0.04	0.51	1.26	0.010	0.011
AWS A5.20 E71T-1C	≤ 0.12	≤ 0.9	≤ 1.75	≤ 0.03	≤ 0.03

Consumable : SF-71 eco Diameter : 1.2mm (0.045in) Shielding gas : C1 (100% CO_2)

Deposition Rate & Efficiency

Diameter	Welding conditions		Wire feed speed m/min (in/min)	Deposition efficiency (%)	Deposition rate kg/hr (lb/hr)
	A	V			
1.2mm (0.045in)	200	26	10.2 (400)	84-87	3.4 (7.5)
	250	28	11.5 (450)	85-88	4.5 (9.9)
	300	32	15.3 (600)	86-88	5.2 (11.4)
1.4mm (0.052in)	250	28	7.6 (300)	85-87	3.9 (8.6)
	300	32	10.2 (400)	85-88	4.8 (10.6)
	330	35	12.8 (500)	86-89	5.8 (12.8)
1.6mm (1/16in)	280	32	6.4 (250)	85-88	4.2 (9.2)
	330	35	7.6 (300)	86-88	4.8 (10.6)
	350	37	8.1 (320)	87-89	5.3 (11.7)

Deposition efficiency = (Deposited metal weight/Wire weight used) × 100 Deposition rate = (Deposited metal weight/Welding time (min)) × 60

Packaging

Diameter mm (in)	Spool kg (lbs)	Drum kg (lbs)
1.0 (0.040)	5 (11) 15 (33)	250 (551) 300 (661)
1.2 (0.045)		
1.4 (0.052)		
1.6 (1/16)		

Proper Welding Parameters

Welding Position	Wire diameter		
	1.2mm (0.045in)	1.4mm (0.052in)	1.6mm (1/16in)
F & HF	120-330A	150-350A	150-360A
Vertical up & Overhead	120-240A	150-250A	180-260A
Vertical down	200-280A	250-300A	250-320A

Shielding gas : C1 (100% CO_2)