



# SM-70 eco

## General purpose solid wire for mild & 490MPa steel

### Introduction



SM-70 eco is a general purpose, copper-coated AWS ER70S-6 solid wire for manual and semiautomatic applications. It is widely used in industries including structural fabrication, automotive, heavy equipment, and shipbuilding.

Designed for all-position welding using a short-circuiting type transfer, SM-70 eco excels with its high deposition efficiency and deep penetration capabilities, facilitating highly efficient welding processes. It is compatible with CO<sub>2</sub>/Argon + 15~25% CO<sub>2</sub> gas.

Industries:

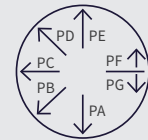


### Specifications

- AWS A5.18 ER70S-6
- EN ISO 14341-A G 42 4 C1 3SiI  
G 42 4 M21 3SiI

### Welding Position

- All position welding



### Approvals

Shielding gas	Welding Position	Register of shipping & Size (mm)					
		CCS	ABS	LR	BV	CWB	TUV
C1 (100% CO <sub>2</sub> )	All (Except OH)	3YS 0.8-1.6	4YSA 0.8~1.6	3YSH15 0.8~1.6	4YSA 0.8~1.6	B-G 49 A 3 C1 S6 (B-G 49A 3 C G6) 0.8- Unlimited	DIN EN ISO 14341-A-G 42 4 C1 3SiI
M21 (80% Ar + 20% CO <sub>2</sub> )	F- H-Fil	-	-	4YSMH15 0.8~1.6	-	-	DIN EN ISO 14341-A-G 42 4 M21 3SiI

### Mechanical Properties of All Weld Metal

Item	YS (MPa)	TS (MPa)	EL (%)	CVN Impact Value			
				Temp	Avg.(J)	Temp	Avg.(J)
SM-70 eco	440	540	28	0°C (32°F)	115	-30°C (-22°F)	85
AWS Spec.	≥400	≥480	≥22	Avg. ≥ 27J@ -30°C			

### Chemical Composition of Wire

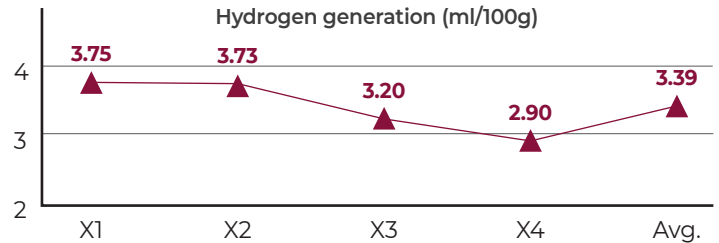
Item	Chemical Composition of Wire (wt%)					
	C	Si	Mn	P	S	Cu
SM-70 eco	0.07	0.88	1.47	0.012	0.011	0.21
AWS A5.18 ER70S-6	0.06~0.15	0.80~1.15	1.40~1.85	≤0.025	≤0.035	≤0.50

### Diffusible Hydrogen Generation

Shielding Gas	Diffusible Hydrogen Contents (ml/100g)				
	X1	X2	X3	X4	Avg.
C1 (100% CO <sub>2</sub> )	3.75	3.73	3.20	2.90	3.39

Hydrogen Analysis using Mercury Method  
Hydrogen Evolution Time : 72 hrs

Environment Temp : 21°C  
Laboratory Pressure : 101.75Kpa



### Packaging

Diameter mm (in)	Spool kg (lbs)	Drum kg (lbs)
0.6 (0.025)	5 (11) 15 (33) 20 (44)	200 (440) 300 (660) 350 (771) 450 (992)
0.8 (0.030)		
0.9 (0.035)		
1.0 (0.040)		
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	150-300A	200-330A	200-360A
Vertical up	120-220A	140-240A	-