



SL-70ML

Seamless metal-cored wire for mild and 490MPa high tensile steel

Introduction



SL-70ML is a seamless metal-cored wire which combines the high deposition rates of a flux cored wire with the high efficiencies of a solid wire. Used with M21 (Ar-20~25% CO₂) shielding gas, it offers a smooth and stable arc, low spatter, minimal slag coverage, and excellent resistance to hydrogen-induced and cold cracking, ensuring clean and dependable welds.

Designed for productivity and precision, SL-70ML is widely used in structural fabrication, bridge and shipbuilding, trailer production, and heavy equipment manufacturing.

Specifications

- AWS A5.18 E70C-6M H4
- AWS A5.18M E48C-6M
- EN ISO 17632-A T46 4 M M21 I H5

Welding Position

- All positions

Packaging

Diameter mm (in)	Spool kg (lbs)	Pac kg (lbs)
1.2 (0.045)	5 (11) 15 (33) 20 (44)	200 (440) 250 (551) 300 (661)
1.4 (0.052)		
1.6 (1/16)		

Mechanical Properties of All Weld Metal

Consumable	Tensile Test			CVN Impact Test J(ft·lbs)	
	YS Mpa (lbs/in ²)	TS Mpa (lbs/in ²)	EL (%)	Temp °C(°F)	Avg. J(ft·lbs)
SL-70ML	490 (71,000)	556 (80,000)	30.5	-30 (-20)	120 (89)
				-40 (-40)	80 (59)
AWS A5.18 E70C-6M	≥ 400 (58,000)	≥480 (70,000)	≥22	≥27J at -30 °C (≥20ft·lbs at -20°F)	

Chemical Composition of All-Weld Metal

Item	Chemical Composition (wt%)				
	C	Si	Mn	P	S
SL-70ML	0.032	0.47	1.31	0.008	0.004
AWS A5.18 E70C-6M	≤ 0.12	≤ 0.90	≤ 1.75	≤ 0.030	≤ 0.030

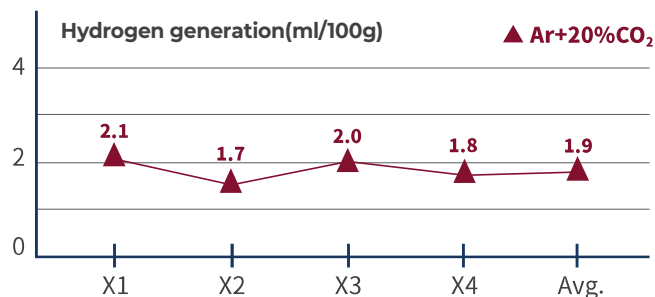
Consumable : SL-70ML
Shielding Gas: M21 (Ar+20%CO₂)

Diameter : 1.2mm (0.045in)
Amp./Volt. : 280A / 30V

Diffusible Hydrogen Generation

Shielding Gas	Diffusible Hydrogen Contents (ml/100g)				
M21 (Ar+20% CO ₂)	X1	X2	X3	X4	Avg.
	2.1	1.7	2.0	1.8	1.9

Hydrogen Analysis Using Gas Chromatography Method (45 °C (113°F) for 72 hrs)



Consumable : SL-70ML Diameter : 1.2mm (0.045in) Amp./Volt. : 280A / 30V
Welding position : 1G(PA) Welding speed : 30cm/min Current type & polarity : DC(+)

Proper Welding Parameters

Consumable	Shielding Gas	Item	Wire diameter
			1.2mm (0.045in)
SL-70ML	M21 (Ar + 20% CO ₂)	Amp.(A)	200-300
		Volt.(V)	22-30