

SC-70ML

Metal-cored wire for mild steel

Introduction



SC-70ML is a gas-shielded metal-cored wire designed for manual and semiautomatic applications. Designed for use with M20 and M21 mixed gases in compliance with EN ISO 14175, it offers high deposition rates, a stable arc, minimal spatter, and superior resistance to porosity, ensuring clean and dependable welds.

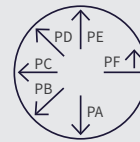
Widely used in shipbuilding, heavy equipment, structural engineering, and fabrication, SC-70ML ensures productivity and precision across diverse applications.

Specifications

- **AWS** A5.18 E70C-6M
- **EN ISO** 17632-A – T46 4 M M21 2 H5

AWS D1.8 is available upon request.

Welding Position



Approvals

Shielding gas	Welding Position	Register of shipping & Size mm(in)								
		JIS	ABS	LR	BV	DNV-GL	TUV	CWB	DB	EN
M21 (80% Ar + 20% CO ₂)	F, HF V-up	Z3313 T49 4 T15-1 M A-U H5	4Y400S A H5 1.2-1.6 (0.045- 1/16)	4Y40S H5 1.2-1.6 (0.045- 1/16)	SA4Y40 M HHH 1.2-1.6 (0.045- 1/16)	IVY40M S H5 1.2-1.6 (0.045- 1/16)	EN ISO 17362-A - T46 4 M M 2 H5	CSA W48 E491C- 6MJ-H4	DIN EN ISO 17632-A- T 46 4 M M21 2 H5	ISO 17632-A- T 46 4 M M21 2 H5
M20 (90% Ar + 10% CO ₂)	F, HF V-up	Approval certificates are currently pending, with the certification process in progress as of December 2024.								

Mechanical Properties of All-Weld Metal

Item	Tensile Test			Impact Test (CVN - Joule)				
	YS (MPa)	TS (MPa)	EL (%)	Temp °C(°F)	X1	X2	X3	Avg.(J)
M21 (80% Ar + 20% CO ₂)	503	582	29.5	-30(-22)	102	105	106	104
				-40(-40)	85	80	88	84
M20 (90% Ar + 10% CO ₂)	510	594	28.7	-30(-22)	98	95	94	96
				-40(-40)	79	74	82	78
AWS A5.18 E70C-6M	≥400	≥480	≥22	-30(-22)	≥27			

Consumable : SC-70ML Diameter : 1.2mm Spool : 15kg

Chemical Composition of All-Weld Metal

Item	Chemical Composition (wt%)					
	C	Si	Mn	P	S	Ni
M21 (80% Ar + 20% CO ₂)	0.031	0.65	1.53	0.010	0.021	0.35
M20 (90% Ar + 10% CO ₂)	0.033	0.69	1.58	0.010	0.022	0.37
AWS A5.18 E70C-6M	≤0.12	≤0.90	≤1.75	≤0.03	≤0.03	≤0.50

Consumable : SC-70ML Diameter : 1.2mm Spool : 15kg

Packaging

Diameter mm (in)	Spool kg (lbs)	Pac kg (lbs)
1.2 (0.045)	5 (11) 15 (33) 20 (44)	250 (551) 300 (661) 350 (771)
1.4 (0.052)		
1.6 (1/16)		

Proper Welding Parameters

Shielding Gas	Welding Position	Wire diameter		
		1.2mm (0.045in)	1.4mm (0.052in)	1.6mm (1/16in)
M21 (80% Ar + 20% CO ₂) M20 (90% Ar + 10% CO ₂)	F & HF	200-300A	260-320A	290-340A