



FCW 81-M

*Metal Cored Wire
For cold tough steel*

Classification

AWS A5.36 : E80T15-M21A8-Ni1-H4

ISO 17632-A : T 50 6 1Ni M M21 1 H5

Description & Applications

Metal cored wire, Nickel alloyed, for welding of carbon, carbon-manganese and high strength steels with Ar + CO₂ shielding gas. Resistant to low temperature down to -60°C. Good characteristics of cold toughness up to -60°C. Good weldability, very low spatter losses and excellent weld bead appearance. Easy slag removal.

Main applications: General steel constructions, foundries, shipyards

Base materials

Fine grain construction steels, cold tough:

EN :	S355JR, S355J0, S355J2, S450J0, S355N-S460N, S355NL-S460NL, S355M-S460M, S355ML-S460ML, S460Q, S500Q, S460QL, S500QL, S460QL1, S500QL1, P355GH, P355NH, P420NH, P460NH, P355N-P460N, P355NH-P460NH, P355NL1-P460NL1, P355NL2-P460NL2, L245NB-L415NB, L245MB-L485MB, L360QB-L485QB, aldur 500Q, aldur500QL, aldur 500QL1
ASTM :	A 350 Gr. LF2; A 516 Gr. 65, 70; A 572 Gr. 42, 50, 60, 65; A 573 Gr. 70; A 588 Gr. B, C, K; A 633 Gr. A, C, D, E; A 662 Gr. B, C; A 678 Gr. B; A 707 Gr. L2, L3; A 841 Gr. A, B, C; API 5 L X42, X52, X60, X65, X70, X52Q, X60Q, X65Q, X70Q

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb	V	P	S
Min					0.80						
Max	0.12	0.80	1.4	0.15	1.10	0.2	0.3	0.05	0.05	0.030	0.030
Type	0.06	0.50	1.3	0.04	0.90	0.01	0.10	0.01	0.02	0.015	0.010

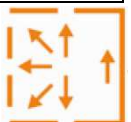
Typical All Weld Metal Mechanical Properties

	R _e (MPa)	R _m (MPa)	A ₅ (%)	KV (J)
Min	500	560	19	-60°C 47
Max		690		
Type	530	620	27	-60°C 85

Welding Current & Instructions

Welding mode	Wire Ø (mm)	Welding parameters			Shielding Gas
		Current (A)	Voltage (V)	Stick-out (mm)	
= +	1.0	160 - 270	21 - 34	10 - 25	ISO 14175 : M21 (Ar/CO ₂) 12-15 l/min
	1.2	190 - 320	22 - 35		
	1.4	200 - 350	23 - 36		
	1.6	210 - 380	23 - 37		

FT En-CF05-190731



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