



MIG F77

Old reference: MIG 100S1

Classification

AWS A5.28 : ER100S-1

ISO 16834-A : G Z

Description & Applications

Copper coated solid wire low alloyed with Nickel and Molybdenum for gas (Ar + CO₂) metal arc welding of high strength steels (R_m > 700MPa). Good impact strength at low temperatures down to -50°C.

Main applications: Chemical and petrochemical industry, offshore fabrication, industrial machinery construction, cranes...

Base materials:

High strength steels :

EN	ASTM
S500Q-S690Q	A 514
S500QL-S690QL	EH62
S500QLN-S690QLN	EH69
P500Q-P690Q	
P500QL1-P690QL1	
P500QL2-P690QL2	
S770QL	

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Cu	Al	Ti	Zr	V	P	S	A/T
Min		0.20	1.25		1.40	0.25								
Max	0.08	0.55	1.80	0.30	2.10	0.55	0.25	0.10	0.10	0.10	0.05	0.010	0.010	0.50
Type	0.07	0.45	1.50	0.10	1.60	0.40	0.10	0.003	0.05	0.001	0.003	0.008	0.005	<0.50

All Weld Metal Mechanical Properties

	R _e (MPa)	R _m (MPa)	A ₅ (%)	KV (J)
Min	610	690	16	-50°C >68
Max				
Type	700	800	18	-50°C 70

Welding Current & Instructions

Welding mode	Wire Ø (mm)	Welding parameters		Shielding Gas
		Current (A)	Voltage (V)	
GMAW = +	1.0 1.2	80 - 260 100 - 360	17 - 32 18 - 34	ISO 14175: M21 (Ar/CO ₂) 12-18 l/min

Preheating and interpass temperature: 135-165°C.

FT En-MF14-210322

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