

Classifications

EN ISO 18276-A	AWS A5.28
T89 6 Z M M 1 H5	E120C-H4

Characteristics and typical fields of application

Seamless, Nickel-Chromium-Molybdenum alloyed, metal cored wire for single- or multilayer welding of high strength steels with Ar-CO₂ shielding gas.
Features include: high yield, good weldability, excellent bead appearance, very low spatter losses and exceptional mechanical properties at low temperatures (-60°C). Wire with very low amount of diffusible hydrogen in the weld metal (< 3 ml/100g). This wire is especially suitable for particular critical applications and high quality welding for crane and offshore constructions.

Base materials

S690Q-S890Q, S690QL-S890QL, S960Q, S960QL, PAS 700, alform 700 M, alform 900 x-treme, alform 960 x-treme

ASTM A 709 Gr. 100 Type B, E, F, H, Q, HPS 100W

Typical analysis of all-weld metal (wt.-%)

	Gas	C	Si	Mn	Cr	Ni	Mo
wt-%	M21	0.10	0.50	1.85	0.40	2.60	0.55

Mechanical properties of all-weld metal

Condition	Yield strength	Tensile strength	Elongation	Impact work	
	R _{p0.2}	R _m	A (L ₀ =5d ₀)	ISO-V KV J	
	MPa	MPa	%	-40°C	-60°C
u	980 (≥890)	1080 (940-1180)	17 (≥15)	58	55 (≥47)

u untreated, as welded – shielding gas M21

Operating data

	Polarity: DC (+)	Shielding gas: (EN ISO 14175) M21	ø (mm) 1.2
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Welding with standard GMAW-facilities possible

Approvals

TÜV (12582), CE