

Classifications

EN ISO 18276-A	EN ISO 18276-B
T69 6 Mn2NiCrMo M M 1 H5	T766T15-1MA-N4C1M2-UH5
AWS A5.36	AWS A5.36M
E110T15-M21A8-K4-H4	E760T15-M21A6-K4-H4

Characteristics and typical fields of application

Seamless, Nickel-Chromium-Molybdenum alloyed metal cored wire for single- or multilayer welding of thermo-mechanical treated steel grades, low alloyed fine grain- and high strength steels to be used with Ar-CO₂ shielding gas.

This metal core wire shows high efficiency, excellent bead appearance, very low spatter losses and low slag formation. The low diffusible hydrogen content of the pure weld metal (1-3ml/100g) and the outstanding mechanical properties at low temperatures (-60°C) also after post weld heat treatment make this wire perfect suitable for steel constructions, offshore applications and crane fabrication.

Base materials

S550Q-S690Q, S550QL-S690QL, P550Q-P690Q, P550QL-P690QL
ASTM A 514 Gr. F, H, Q; A 709 Gr. 100 Type B, E, F, H, Q, HPS 100W

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

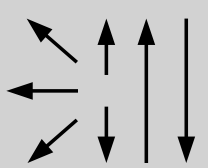
	Gas	C	Si	Mn	Cr	Ni	Mo
wt-%	M21	0.07	0.40	1.40	0.50	2.20	0.40

Mechanical properties of all-weld metal

Condition	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J	
	MPa	MPa	%	-40°C	-60°C
u	720 (≥690)	810 (770–900)	17 (≥17)	80	70 (≥47)
s	700 (≥690)	790 (770–900)	19 (≥17)	70	60 (≥47)

u untreated, as welded – shielding gas M21
s stress relieved 580°C/2h – shielding gas M21

Operating data

	Polarity: DC (+)	Shielding gas: (EN ISO 14175) M21; M20	ø (mm)
			1.0
1.2			
1.4			
1.6			

Welding with standard GMAW power source possible

Approvals

TÜV, DB, DNV, ABS, LR, CWB, CE