

Classifications

EN ISO 17632-A	EN ISO 17632-B	AWS A5.36/SFA-5.36	AWS A5.36M/SFA-5.36M
T50 6 1Ni M M21 1 H5	T576T15-1M21A-N2-UH5	E81T15-M21A8-Ni1-H4	E551T15-M21A6-Ni1-H4

Characteristics and typical fields of application

Seamless all positional metalcored wire, Nickel alloyed, metal cored wire for single- or multilayer welding of carbon, carbon-manganese and 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) in as welded conditions as well after post weld heat treatment. This wire is especially suitable for root-pass welding in off-shore and pipeline applications. This product can be used in sour gas applications. (HIC tested acc. to NACE TM-0284). Test values for SSC are available upon request. This wire is CTOD tested at -40°C.

Base materials

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, aldur 500QL, 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 analysis of all-weld metal (wt.-%)

	Gas	C	Si	Mn	Ni
wt-%	M21	0.06	0.50	1.3	0.90

Mechanical properties of all-weld metal

Condition	Yield strength R _e	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J
	MPa	MPa	%	-60 °C
u	530 (≥500)	620 (570-690)	27 (≥18)	90 (>47)
s	500	560	26	90
n	360	520	33	100

u untreated, as welded – shielding gas M21: Argon+15-25% CO₂
s stress relieved 580°C / 3h – shielding gas M21: Argon+15-25% CO₂
n normalized 920°C / 30min – shielding gas M21: Argon+15-25% CO₂

Operating data

	Polarity:	Shielding gas:	ø (mm)
	DC (+)	(EN ISO 14175)	1.0
		M21: Argon+15-25% CO ₂	1.2
			1.4
			1.6

Welding with standard GMAW power source possible

Approvals

TÜV, DB, ABS, DNV-GL, LR, CWB, CE