

Classifications

EN ISO 17632-A	EN ISO 17632-B	AWS A5.28 / SFA-5.28
T 50 6 1 Ni M M21 1 H5	T 57 6 T15-1M21A-N2-UH5	E80C-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, S355JO, S355J2, S450JO, 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

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

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R _e	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact energy 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
 s stress relieved 580°C / 3h – shielding gas M21
 n normalized 920°C / 30min – shielding gas M21

Operating data

	Polarity	DC+	Dimension mm
	Shielding gas	M21	1.2
	(EN ISO 14175)		1.6

Welding with conventional or pulsed power sources using DC+

Approvals

TÜV (06205), DB (42.052.15), ABS, DNV, CWB, CE