

Classifications

EN ISO 17632-A	EN ISO 17632-B	AWS A5.36	AWS A5.36M
T50 6 1Ni P M 1 H5	T556T1-1MA-N2-UH5	E81T1-M21A8-Ni1-H4	E551T1-M21A6-Ni1-H4
T46 4 1Ni P C 1 H5	T554T1-1CA-N2-H5	E81T1-C1A4-Ni1-H4	E551T1-C1A4-Ni1-H4

Characteristics and typical fields of application

Seamless rutile, Nickel alloyed, flux cored wire for single- or multilayer welding of Carbon, Carbon-Manganese steels and high strength steels with Argon-CO₂.

Main features: excellent weldability in all positions, excellent bead appearance, very low spatter losses, fast freezing and easy to remove slag. The exceptional mechanical properties of this wire even at low temperatures (-60°C), also after post weld heat treatment make it especially suitable for offshore applications. The wire is CTOD tested.

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	0.07	0.45	1.3	0.85

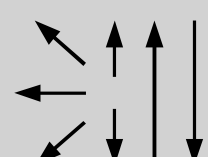
Mechanical properties of all-weld metal

Condition	Yield strength R _e	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J			
	MPa	MPa	%	+20°C	-40°C	-50°C	-60°C
u	550 (≥500)	610 (560–690)	25 (≥18)	110	90	70	65 (≥47)
s	520 (≥500)	580 (560–690)	29 (≥18)		60		

u untreated, as welded – shielding gas M21

s stress relieved 620°C / 2h – shielding gas M21

Operating data

	Polarity: DC (+)	Shielding gases: (EN ISO 14175) M21; M33	ø (mm)
			1.0
			1.2
			1.4
1.6			

Welding with standard GMAW-facilities possible

Approvals

TÜV (12569), DB (42.014.44), GL (5Y46H5S/M21;4YH5S/C1), DNV (5Y46MS(H5)/M21;4YMS(H5)/C1), ABS (5Y46SAH5/M21;4YSAH5/C1), LR, BV (SA3YM/M21;SA3YM/C1), RINA (4YSH5/M21+C1), RS (4Y50MSH5/M21;4Y40MSH5/C1), CWB, CE