

Classifications

EN ISO 17632-A	EN ISO 17632-B	AWS A5.29 / SFA-5.29
T 50 6 2Ni P M21 1 H4	T 57 6 T1-1M21A-N5-H5	E81T1-Ni2M-JH4

Characteristics and typical fields of application

Seamless rutile nickel alloyed flux-cored wire for single or multilayer welding of carbon, carbon-manganese steels and fine grain steels with Ar-CO₂ shielding gas.

Main features: excellent weldability in all positions, excellent bead appearance, low spatter losses, fast freezing and easy to remove slag. The exceptional mechanical properties of this wire even at low temperatures (-60°C) as well as the low content of diffusible hydrogen make it especially suitable for off-shore applications. This wire is CTOD tested at -50°C.

Base materials

10Ni14, 12Ni14, 13MnNi6-3, 15NiMn6, S275N-S460N, S275NL-S460NL, S275M-S460M, S275ML- S460ML, P275NL1-P460NL1, P275NL2-P460NL2, L245NB-L415NB, L245MB-L450MB, L360QB- L450QB
 ASTM A 203 Gr. D, E; A 333 Gr. 3; A334 Gr. 3; A 350 Gr. LF1, LF2, LF3; A 420 Gr. WPL3, WPL6; A 516 Gr. 60, 65; AA 529 Gr. 50; A 572 Gr. 42, 65; A 633 Gr. A, D, E; A 662 Gr. A, B, C; A 707 Gr. L1, L2, L3; A 738 Gr. A; A 841 A, B, C, API 5 L X42, X52, X60, X65, X52Q, X60Q, X65Q

Typical analysis

	Gas	C	Si	Mn	Ni
wt.-%	M21	0.06	0.45	1.30	2.00

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

Condition	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact energy ISO-V KV J
	MPa	MPa	%	-60°C
u	580 (≥ 500)	640 (≥ 570 – 690)	25 (≥ 18)	80 (≥ 47)

u - untreated, as welded – shielding gas M21

Operating data

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

Welding with standard GMAW-facilities possible

Approvals

ABS, DNV, LR, RS, CE