

Classifications (*)

EN ISO 17632-A	EN ISO 17632-B	AWS A5.36	AWS A5.36M
T46 4 M M21 1 H5	T554T15-1M21A-UH5	E71T15-M21A4-CS2-H4	E491T15-M21A4-CS2-H4
T46 5 M M20 1 H5	T555T15-1M20A-UH5	E71T15-M20A5-CS2-H4	E491T15-M20A5-CS2-H4

Characteristics and typical fields of application

Seamless all positional metalcored high efficiency wire especially designed for semi-automatic and fully automatic joint welding of unalloyed and fine-grained constructional steels. Seamless technology guarantees a higher wire rigidity that give- as benefits- exact ignition and positioning accuracy. Very high metal recovery between 95 and 97% are additional benefit of this wire. Steady spray arc-like droplet transfer with minimal spatter formation, good penetration, high resistance to porosity, good behavior as well as low hydrogen contents (~ 2ml/100g weld deposit) are further quality features of this metalcored wire. Minimum oxide residues permit the welding of multi passes without the need for inter-run cleaning. Ideal for horizontal and flat fillet welds.

Base materials

Steels up to a yield strength of 460 MPa (67 ksi)

S235JR-S355JR, S235JO-S355JO, S450JO, S235J2-S355J2, S275N-S460N, S275M-S460M, P235GH-P355GH, P275NL1-P460NL1, P215NL, P265NL, P355N, P285NH-P460NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L450QB, L245MB-L450MB, GE200-GE240, ship building steels: A, B, D, E, A 32-E 36

ASTM A 106 Gr. A, B, C; A 181 Gr. 60, 70; A 283 Gr. A, C; A 285 Gr. A, B, C; A 350 Gr. LF1; A 414 Gr. A, B, C, D, E, F, G; A 501 Gr. B; A 513 Gr. 1018; A 516 Gr. 55, 60, 65, 70; A 573 Gr. 58, 65, 70; A 588 Gr. A, B; A 633 Gr. C, E; A 662 Gr. B; A 711 Gr. 1013; A 841 Gr. A; API 5 L Gr. B, X42, X52, X56, X60, X65

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

	Gas	C	Si	Mn
wt.-%	M21	0.07	0.7	1.5

Mechanical properties of all-weld metal

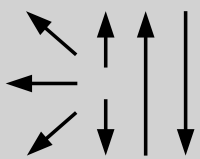
Condition	Yield strength R _e	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J		
	MPa	MPa	%	-40°C	-46°C	-50°C (**)
u	490 (≥460)	590 (550–660)	27 (≥22)	90 (≥47)	70 (≥27)	60 (≥47)
s1	450	550	27	100		

u untreated, as welded – shielding gas M20; M21 (Ar + 5 – 25 % CO₂)

s1 stress relieved, 580°C/2h – shielding gas M21; M20 (Ar + 5 – 25 % CO₂)

(**) only for shielding gas M20 (Ar +5 - 15% CO₂)

Operating data

	Polarity:	Shielding gases:	ø (mm)
	DC (+)	(EN ISO 14175)	1.0
		M20, M21: Ar + 5 – 25 % CO ₂	1.2
			1.4
			1.6

Welding with standard GMAW power source possible

(*) The wire meets the requirements AWS A5.18: E70C-6MH4

Approvals

TÜV, DB, ABS, BV, DNV-GL, CWB, LR, CE