

Classifications

EN ISO 17634-A	EN ISO 17632-A	AWS A5.28 / SFA-5.28
T Mo M M21 1 H5	T 46 2 Mo M M21 1 H5	E80C-GH4

Characteristics and typical fields of application

Seamless, Molybdenum alloyed, metalcored wire for single or multilayer welding of creep resistant steels up to 450°C with Ar-CO₂ shielding gas.

Features include: high yield, good weldability, excellent bead appearance and low spatter losses. Wire with very low amount of diffusible hydrogen (<3ml/100g) that reduces the risk of cracks.

Base materials

16Mo3, 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

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

	Gas	C	Si	Mn	Mo
wt.-%	M21	0.09	0.35	1.10	0.50

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	%	-20°C
s	550 (≥ 470)	630 (550 – 680)	25 (≥ 22)	90 (≥ 47)

s stress relieved 620°C / 60min – shielding gas M21

Operating data

	Polarity	DC +	Dimension mm
	Shielding gas (EN ISO 14175)	M21	1.0
			1.2
			1.6

Preheating, interpass temperature and post weld heat treatment as required by the base metal. For heavy walled components preheating to a min. 150°C is recommended.

Slightly trailing torch position (angel appr. 80°), slight weaving is recommended for positional welding Final PWHT should be carried out between 600°C and 630°C for a minimum of 1 hour.

Approvals

TÜV (07157), DB (42.052.09), CE