

EN ISO 17632-A: T46 6 M M 1 H5
T42 5 M C 1 H5
EN ISO 17632-B: T556T15-1MA H5
T495T15-1CA-H5
AWS A5.36: E70T15-M21A8-CS1-H4
E70T15-C1A6-CS1-H4
AWS A5.36M: E490T15-M21A6-CS1-H4
E490T15-C1A5-CS1-H4

BÖHLER HL 51 T-MC

**Metal cored wire - Seamless
Unalloyed**

Description

Seamless metal cored wire for single- or multilayer welding of Carbon, Carbon-Manganese and similar types of steels, including fine grain steels with Argon-CO₂ or pure 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 with post weld heat treatment. This wire is especially suitable for automated-robotized applications and for root pass welding for piping and butt-joints. This wire is CTOD-tested.

Typical Composition of All-weld Metal

	Gas	C	Si	Mn
Wt-%	M21	0.06	0.80	1.50
Wt-%	C1	0.05	0.60	1.40

Mechanical Properties of All-weld Metal

	u	u1	s
Yield strength R _e MPa:	500 (≥460)	460 (≥420)	420
Tensile strength R _m MPa:	600 (530-660)	560 (530-640)	510
Elongation A (L ₀ =5d ₀) %:	29 (≥20)	30 (≥20)	24
Impact work ISO-V KV J	RT: 140	100	-
	0°C: 130	90	-
	-40°C: 90	85	90
	-50°C: -	60 (≥47)	-
	-60°C: 60 (≥47)	-	-

u = untreated, as welded – shielding gas M21
u1= untreated, as welded – shielding gas C1
s = stress relieved 620°C/2h – shielding gas M21

Operating Data



re-drying: -
shielding gases: (EN ISO 14175) **M21; C1**
welding with standard GMAW-facilities possible

ø mm
1,0
1,2
1,4
1,6



In PG-Position

Base Materials

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

Approvals and Certificates

TÜV-D, DB, GL, DNV, ABS, LR, BV, RINA, CWB, CE (approval transfer in progress)