

## Classifications

EN ISO 636-A	EN ISO 636-B	AWS A5.18	AWS A5.18M
W 46 5 W2Si	W 55A 5U W3	ER70S-3	ER48S-3

## Characteristics and typical fields of application

GTAW rod for high integrity welds. The low Si-content renders this filler metal particularly also for joint welds that are subjected to enamelling or galvanising. Especially suited for root pass welding (approved at  $-50\text{ °C}$ ). BÖHLER EML 5 can be used in sour gas applications (HIC-Test acc. to NACE TM-02-84). Test values for SSC-test are available too.

## Base materials

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

S235J2G3 - S355J2G3, E360, P235T1-P355T1, P235G1TH, L210, L290MB, P255G1TH, P235GH, P265GH, P295GH, P310GH, P255NH, S235JRS1 - S235J4S, S355G1S - S355G3S, S255N - S385N, P255NH-P385NH, GE200-GE260

ASTM A27 a. A36 Gr. all; A214; A242 Gr.1-5; A266 Gr. 1, 2, 4; A283 Gr. A, B, C, D; A285 Gr. A, B, C; A299 Gr. A, B; A328; A366; A515 Gr. 60, 65, 70; A516 Gr. 55; A570 Gr. 30, 33, 36, 40, 45; A 572 Gr. 42, 50; A606 Gr. all; A607 Gr. 45; A656 Gr. 50, 60; A668 Gr. A, B; A907 Gr. 30, 33, 36, 40; A841; A851 Gr. 1, 2; A935 Gr.45; A936 Gr. 50; API 5 L Gr. B, X42-X60

## Typical analysis of the TIG rods (wt.-%)

	C	Si	Mn
wt.-%	0.1	0.6	1.2

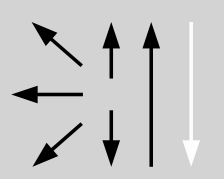
## Mechanical properties of all-weld metal

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	-20 °C	-50 °C
u	<b>520</b> ( $\geq 460$ )	<b>620</b> (530 – 680)	<b>26</b> ( $\geq 23$ )	<b>220</b>	<b>200</b>	<b>90</b> ( $\geq 47$ )
s	<b>480</b>	<b>580</b>	<b>28</b>	<b>200</b>	<b>210</b>	

u untreated, as welded – shielding gas 100 % Argon

s stress relieved, 600 °C/2 h – shielding gas 100 % Argon

## Operating data

	Polarity:	Shielding gas:	Rod marking:	$\varnothing$ (mm)
	DC (–)	100 % Argon	front: ✦ W2Si back: ER70S-3	1.6 2.0 2.4 3.0

## Approvals

TÜV (1096.), DB (42.014.02), Statoil, CE