

## Classifications

<b>AWS A5.18</b>	<b>AWS A5.18M</b>
ER70S-2	ER48S-2

## Characteristics and typical fields of application

Böhler ER 70 S-2 is a copper GTAW rod containing Al, Ti and Zr as strong deoxidants in addition to Mn and Si and is often referred to as triple deoxidised.

This has advantages when rimming or semi-killed mild steels are welded or where joint preparations are rusty or contaminated.

Böhler ER 70 S-2 is primarily used for single pass welding. For applications involving single and multipass GTAW and/or low temperature toughness requirements down to  $-50\text{ °C}$  we recommend our GTAW rod Böhler EML 5 (ER70S-3). BÖHLER ER 70 S-2 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

Especially for rod pass welding of steels up to a yield strength of 420 MPa (60 ksi).

S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S275N-S420N, S275M-S420M, P235GH-P355GH, P355N, P285NH-P355NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L245MB-L415MB, 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 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. A, C, E; A 711 Gr. 1013; API 5 L Gr. B, X42, X52, X56, X60

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

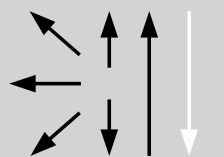
	C	Si	Mn	Ti	Zr	Al
wt-%	0.05	0.5	1.2	+	+	+

## 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		
				+20 °C	-30 °C	-50 °C
u	<b>420</b>	<b>520</b>	<b>23</b>	<b>180</b>	<b>120</b>	<b>80</b>

u untreated, as welded – shielding gas 100 % Argon

## Operating data

	<b>Polarity:</b> DC (-)	<b>Shielding gases:</b> 100 % Argon	<b>Rod marking:</b> back: ✈ ER70S-2	<b>ø (mm)</b>
				1.6
				2.0
				2.4