

## Classifications

EN ISO 2560-A	EN ISO 2560-B	AWS A5.1	AWS A5.1M
E 46 5 B 4 2 H5	E 4918-1 A U H5	E7018-1H4R	E4918-1H4R

## Characteristics and typical fields of application

Basic electrode for high-quality joint welds with high strength and toughness properties. Low-temperature ductility down to  $-50^{\circ}\text{C}$ . Very low hydrogen content in the weld deposit (acc. AWS condition HD < 4 ml/100g weld metal). Excellent weld ability in all positions except vertical-down. Suitable for welding in steel construction, boiler, tank, container and vehicle construction, shipbuilding and mechanical engineering. Also suited for buffer layers on build ups on high-carbon steels. It can be used in sour gas applications (HIC-Test acc. 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, S235JR - S355J0, P235T1-P355T1, P235T2 -P355T2, L210 - L415NB, L290MB, P235G1TH, P255G1TH, P235GH, P265GH, P295GH, S235JRS1 - S235J4S, S355G1S - S355G3S, S255N - S460N, P255NH-P355NH, S255NL - S460NL1, GE200-GE300

ASTM A27 a. A36 Gr. all; A214; A 242 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 all-weld metal (wt.-%)

	C	Si	Mn
wt-%	0.07	0.35	1.4

## 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	-20 °C	-50 °C
u	<b>500</b> ( $\geq 460$ )	<b>550</b> (530 – 680)	<b>30</b> ( $\geq 20$ )	<b>220</b>	<b>170</b>	<b>90</b> ( $\geq 47$ )
s	<b>470</b>	<b>530</b>	<b>30</b>	<b>200</b>		

u untreated, as welded

s stress relieved 580 °C/2h / furnace down to 300 °C / air

## Operating data

	Polarity: DC (+)	Redrying if necessary: 300 – 350 °C, min. 2 h	Electrode identification: FOX EV 55 7018-1 E 46 5 B	$\varnothing$ (mm)	L mm	Amps A
				2.5	250	80 – 110
				3.2	350	100 – 140
				4.0	450	130 – 180
				5.0	450	180 – 230

## Approvals

TÜV (03654.), RMR (3 YHH), LTSS, SEPROZ, CE