

Classifications

EN ISO 2560-A	EN ISO 2560-B	AWS A5.1	AWS A5.1M
E 38 4 B 4 2 H5	E 4916-1 A U H5	E7016-1H4R	E4916-1H4R

Characteristics and typical fields of application

Basic electrode for high-quality welds. Good weld ability in all positions except vertical-down. Metal recovery about 110 %. Very low hydrogen content (according AWS condition HD < 4 ml/100g weld metal). Weld metal extremely ductile, crack resistant and ageing resistant thus especially suited for rigid welds with heavy seam cross sections.

Base materials

Steels up to a yield strength of 380 MPa (52 ksi)

S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S275N-S355N, S275M-S355M, P235GH-P355GH, P355N, P275NL1-P355NL1, P215NL, P265NL, P285NH-P355NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L360NB, L245MB-L360MB, 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, LF2; 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, D; A 662 Gr. A, B, C; A 678 Gr. A, B; A 711 Gr. 1013; API 5 L Gr. B, X42, X52, X56

Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn
wt.-%	0.07	0.4	0.9

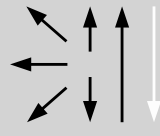
Mechanical properties of all-weld metal

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	-40 °C	-45 °C
u	440 (≥ 380)	530 (470 – 600)	27 (≥ 20)	190	110	90 (≥ 47)	≥ 27
s	400 (≥ 380)	500 (470 – 600)	29 (≥ 20)	200	150	100	

u untreated, as welded

s stress relieved 600 °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 47 7016-1 E 38 4 B	ø (mm)	L mm	Amps A
				2.5	250/350	80 – 110
				3.2	350/450	100 – 140
				4.0	450	130 – 180
				5.0	450	180 – 230

Approvals

TÜV (1098.), DB (10.014.09), ABS (3H5), BV (3HHH), DNV (3H10), GL (3H5), LR (3m H5), RMR (2), RINA (3YH5, 3H5), LTSS, SEPROZ, CE