

Classifications

AWS A5.5 / SFA-5.5	AWS A5.5M	EN ISO 3580-A	EN ISO 3580-B
E9018-B3 H4R	E6218-B3 H4	E CrMo2 B 4 2 H5	E6218-2C1M H5

Characteristics and typical fields of application

Basic covered stick electrode for welding 2.25 % Cr 1 % Mo alloyed steels. Approved in long-term exposure up to +1112 °F service temperature. Applicable for welds in refineries, boiler construction, and thermal power plants. Core wire alloyed electrode which provides reliable creep rupture properties. Crack resistant and ductile deposit, high creep rupture strength, low hydrogen content (acc. AWS condition HD < 4 ml/100 g). Good weldability in all positions except vertical down. Deposit is nitride-able and heat treatable. Metal recovery approx. 110 %.

Base materials

High temperature steels and similar alloyed cast steels, QT-steels similar alloyed up to 140 ksi tensile strength, similar alloyed case hardening steels, nitriding steels.

1.7380 10CrMo9-10, 1.7276 10CrMo11, 1.7281 16CrMo9-3, 1.7383 11CrMo9-10, 1.7379

G17CrMo9-10, 1.7382 G19CrMo9-10

ASTM A 182 Gr. F22; A 213 Gr. T22; A 234 Gr. WP22; 335 Gr. P22; A 336 Gr. F22; A 426 Gr.

CP22

Typical analysis

	C	Si	Mn	Cr	Mo	P	Sb	Sn	As
wt.-%	0.08	0.3	0.7	2.2	1.0	≤ 0.010	≤ 0.005	≤ 0.006	≤ 0.005

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact energy ISO-V KV J
	ksi	ksi	%	68 °F -20.20 °F
T 1	87 (≥ 77)	102 (≥ 90)	22 (≥ 18)	125 (≥ 35) 77
T 2	81 (≥ 58)	96 (≥ 73)	21 (≥ 18)	81
T 3	80 (≥ 58)	95 (≥ 73)	21 (≥ 18)	44
QT	70 (≥ 58)	87 (≥ 73)	21	133

T 1: tempered (1274°F / 1h)

T 2: tempered (1346°F / 2h)

QT: quenched and tempered (1706°F / 0.5h / air 1256°F / 15h / air)

Operating data

	Polarity	DC +	Dimension inch	Current A
	Electrode identification	FOX CM 2 Kb 9018-B3 E CrMo2 B	3/32" × 10"	80 – 110
	Redrying	525 – 625°F / 2h	1/8" × 14"	100 – 140
			5/32" × 14"	130 – 180
			5/32" × 18"	130 – 180
			~3/16" × 18"	180 – 230

Preheating and interpass temperatures 390°F – 660°F. Post weld annealing at 1290°F – 1380°F at least 1 hour followed by cooling in furnace down to 572 °F and still air.

Approvals

TÜV (00722), DB (10.014.81), ABS, DNV, CE