

Classifications

EN ISO 3581-A	AWS A5.4
E 18 8 Mn B 2 2	E307-15 (mod.)

Characteristics and typical fields of application

Basic electrode for joint welding of dissimilar joints, problem steels and for repair and maintenance. Very popular electrode for numerous applications. The weld metal offers exceptionally high ductility and elongation together with outstanding crack resistance. There is no fear of embrittlement when operating down to service temperatures of $-110\text{ }^{\circ}\text{C}$ or above $+500\text{ }^{\circ}\text{C}$. The scaling resistance goes up to $+850\text{ }^{\circ}\text{C}$. When working at service temperatures above $+650\text{ }^{\circ}\text{C}$ please contact the supplier. The weld metal can be post weld heat treated without any problems. The deposit will work harden and offers good resistance against cavitation. Ductility is good even after high dilution when welding problem steels or when subjected to thermal shock or scaling. An excellent alloy providing cost effective performance.

Base materials

For fabrication, repair and maintenance!

Dissimilar joints, tough buffer and intermediate layers prior to hardfacing, 14 % manganese steels, 13 – 17 % chromium and heat resistant steels up to $+850\text{ }^{\circ}\text{C}$, armour plates, high carbon and quenched & tempered steels, surfacing of gears, valves, turbine blades etc.

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

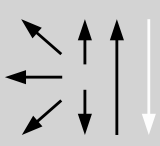
	C	Si	Mn	Cr	Ni
wt-%	0.09	0.7	6.5	18.6	8.8

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	%	$+20\text{ }^{\circ}\text{C}$	$-110\text{ }^{\circ}\text{C}$
u	460 (≥ 350)	660 (≥ 500)	35 (≥ 25)	90	≥ 32

u untreated, as welded

Operating data

	Polarity: DC (+)	Redrying if necessary: $120 - 200\text{ }^{\circ}\text{C}$ / min. 2 h	Electrode identification: FOX A 7 CN E 18 8 Mn B	ø (mm)	L mm	Amps A
				2.5	300	55 – 75
				3.2	350	80 – 100
				4.0	350	100 – 130
				5.0	450	140 – 170
				6.0	450	160 – 200

Approvals

TÜV (00022.), DNV, GL, CE