

**Classifications**

<b>EN ISO 3581-A</b>	<b>AWS A5.4 / SFA-5.4</b>
E 13 B 2 2	E410-15 (mod.)

**Characteristics and typical fields of application**

Basic coated low-hydrogen electrode of E 13 B / E410-15 (mod.) type. Good welding characteristics in all positions except vertical-down. Mainly used for surfacing on sealing faces of gas, water and steam valves to meet stainless and wear resistant overlays for service temperatures up to 450°C. Be careful with dilution, at least two layers build up should remain after machining. Welding of similar, stainless and heat-resistant chromium steels provides matching color of weld metal with very good ability to polishing. Scaling resistant up to 900°C.

**Base materials**

Weld surfacing of most weldable unalloyed and low-alloyed steels.  
Welding of corrosion resistant Cr-steels with max. 0.20% carbon content (repair welding).  
Heat resistant Cr-steels of similar chemical composition.  
1.4006 X12Cr13, 1.4021 X20Cr13  
AISI 410, 420

**Typical analysis**

	C	Si	Mn	Cr
wt.-%	0.08	0.7	0.8	13.5

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


Condition	Yield strength $R_{p0.2}$	Tensile strength $R_m$	Elongation A ( $L_0=5d_0$ )	Hardness
	MPa	MPa	%	HV
u	600	850	6	315
a	520 ( $\geq 250$ )	600 ( $\geq 520$ )	20 ( $\geq 15$ )	305

u untreated, as-welded

a annealed, 750°C for 2 h / cooling in furnace

Weld metal hardness strongly affected by chemical composition of base material – increases with carbon content and dilution

**Operating data**

	<b>Polarity</b>	DC+	<b>Dimension mm</b>	<b>Current A</b>
	<b>Electrode identification</b>	FOX KW 10 E 13 B	2.5 × 300	60 – 80
			3.2 × 350	80 – 100
			4.0 × 350	110 – 130

Suggested preheating and interpass temperature 200 – 300°C.

Post weld heat treatment at 700 – 750°C depending on base material and requirements.

Re-drying at 300 – 350°C for min. 2 h if necessary.

**Approvals**

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