

## Classification

EN ISO 3581-A	EN ISO 3581-B	AWS A5.4
E 25 20 R 3 2	ES310-16	E310-16

## Characteristics and typical fields of application

Rutile electrode, core wire alloyed for analogous, heat resisting rolled steels e.g. in annealing shops, hardening shops, steam boiler construction, the crude oil industry and the ceramics industry. In weld joints exposed to sulphurous gases the final layer has to be deposited by means of FOX FA. Smooth beads and easy slag removal. Scaling resistance up to +1200 °C. The temperature range between +650 and +900 °C should be avoided owing to the risk of embrittlement. Thick-walled welds to be carried out by means of the basic electrode FOX FFB.

## Base materials

### Austenitic

1.4841 X15CrNiSi25-20, 1.4845 X12CrNi25-21, 1.4828 X15CrNiSi20-12, 1.4840 G-X15CrNi25-20, 1.4846 G-X40CrNi25-21, 1.4826 G-X40CrNiSi22-9

### Ferritic-perlitic

1.4713 X10CrAl7, 1.4724 X10CrAl13, 1.4742 X10CrAl18, 1.4762 X10CrAl25, 1.4710 G-X30CrSi6, 1.4740 G-X40CrSi17

AISI 305, 310, 314, ASTM A297 HF, A297 HJ

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

	C	Si	Mn	Cr	Ni
wt.-%	0.12	0.5	2.2	26.0	21.0

## Mechanical properties of all-weld metal

Condition	Yield strength R <sub>p0,2</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
u	<b>430</b> (≥ 350)	<b>620</b> (≥ 550)	<b>35</b> (≥ 30)	<b>75</b> (≥ 47)

u untreated, as welded

## Operating data

	Polarity:	Redrying if necessary:	Electrode identification:	ø (mm)	L mm	Amps A
	DC (+)	120 – 200 °C,	FOX FFB-A 310-16	2.0	300	40 – 60
	AC	min. 2 h	E 25 20 R	2.5	300	50 – 80
				3.2	350	80 – 110
				4.0	350	110 – 140

Preheating and interpass temperatures for ferritic steels +200 – 300 °C.

## Approvals

Statoil, VUZ, SEPROZ