

Classification

EN ISO 3581-A

E Z25 22 2 NL B 2 2

Characteristics and typical fields of application

Basic electrode, Cr-Ni-Mo core wire-alloyed. Characterised by a low C-content, a limited Mo-content (for better Huey-test-resistance), a well-defined N-alloying as well as a high Ni-content to assure a fully austenitic structure (ferrite contents < 0.5 %). The corrosion rates in the Huey-test are 0.08 g/m².h (4 mils/year). The electrode is suited for urea plant components exposed to extremely severe corrosion at high pressures and temperatures. The weld deposit will exhibit superior resistance to boiling concentrated nitric acid (optimum condition: 60 – 80 % HNO₃) when made to join components of the highest Huey test quality. It is also recommendable for welds wetted by strong chloride solutions at high temperatures. The chromium and molybdenum percentages create good resistance to pitting from solutions containing chlorine ions. Further applications involve severe corrosive service in such industries as dyeing (leaching and dyeing baths), textiles, paper, leather, chemicals, pharmaceuticals, and rayon.

Base materials

X2CrNiMoN25-22-2 (1.4466) and in Combination with X1CrNiMoN25-25-2 (1.4465), X2CrNiMo18-14-3 (1.4435)

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

	C	Si	Mn	Cr	Ni	Mo	N
wt.-%	≤ 0.035	0.4	5.3	25	22	2.2	0.14

Mechanical properties of all-weld metal

Condition	Yield strength R _{p0,2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	-196 °C
u	405 (≥ 320)	615 (≥ 510)	35 (≥ 25)	110	> 32

u untreated, as welded

Operating data

	Polarity:	Redrying if necessary:	Electrode identification:	∅ (mm)	L mm	Amps A
	DC (+)	250 – 300 °C, min. 2 h	FOX EASN 25 M EZ 25 22 2 NL B	2.5	300	55 – 75
				3.2	350	80 – 105
				4.0	350	90 – 135

During welding an interpass temperature of 150 °C and a weaving above two times core wire diameter should be avoided. The arc should be kept short. Grind out root pass end craters and use intermediate current settings.

Approvals

TÜV (09750.), SEPROZ, CE