

Classifications

EN ISO 3581-A	EN ISO 3581-B	AWS A5.4 / SFA-5.4
E 19 12 3 L R 3 2	ES316L-16	E316L-17

Characteristics and typical fields of application

Rutile coated, core wire alloyed electrode of E 19 12 3 L R / E316L-17 type. Preferably used for 1.4404 and 1.4435 / 316L austenitic stainless steel grades suitable in all industries using similar or high carbon steels or ferritic 13Cr-steels. Designed for first class weld seams and easy handling on AC or DC. High current carrying capacity with minimum spatter formation. Self-releasing slag, smooth and clean weld profile. Good resistance to general and pitting corrosion. Max. service temperature 400°C.

Base materials

1.4401 X5CrNiMo17-12-2, 1.4404 X2CrNiMo17-12-2, 1.4409 GX2CrNiMo19-11-2, 1.4429 X2CrNiMo17-12-3, 1.4432 X2CrNiMo17-12-3, 1.4435 X2CrNiMo18-14-3, 1.4436 X3CrNiMo17-12-3, 1.4571 X6CrNiMoTi17-12-2, 1.4580 X6CrNiMoNb17-12-2, 1.4583 X10CrNiMoNb18-12

UNS S31600, S31603, S31635, S31640, S31653

AISI 316L, 316Ti, 316Cb

Typical analysis of all-weld metal

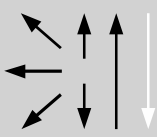
	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.03	0.8	0.8	18.8	11.5	2.7

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 work ISO-V KV J	
	MPa	MPa	%	20°C	-120°C
u	460 (≥ 320)	590 (≥ 510)	40 (≥ 25)	65	50 (≥ 32)

u untreated, as welded

Operating data

	Polarity DC+ / AC	Electrode identification FOX EAS 4 M-A 316L-17 E 19 12 3 L R	Dimension mm	Current A
			1.5 × 250	25 – 40
			2.0 × 300	40 – 60
			2.5 × 350 (250)	50 – 90
			3.2 × 350	80 – 120
			4.0 × 350 (450)	110 – 160
			5.0 × 450	140 – 200

Suggested heat input is max. 2.0 kJ/mm and interpass temperature max. 150°C.

Redrying if necessary at 120 – 200°C for min. 2 h.

Approvals

TÜV (00773), DB (30.014.14), ABS, DNV GL, LR, CWB, RINA, CE