

Classifications

EN ISO 3581-A	AWS A5.4 / SFA-5.4
E 19 9 Nb R 3 2	E347-17

Characteristics and typical fields of application

Rutile coated, cored wire alloyed stabilized electrode of E 19 9 Nb R / E347-17 type. Mainly for welding Ti and Nb stabilized 1.4541 / 321 and 1.4546 / 347 austenitic stainless steel grades. Designed for first class weld seams and easy handling on both AC and DC. High current carrying capacity with minimum spatter formation. Self-releasing slag, smooth and clean weld profile. The corrosion resistance corresponds to that of 316Ti with good resistance to general and pitting corrosion. Max. service temperature 400°C.

Base materials

1.4301 X5CrNi18-10, 1.4306 X2CrNi19-11, 1.4311 X2CrNiN18-9, 1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5Cr-NiNb18-10, 1.4550 X6CrNiNb18-10, 1.4552 GX5CrNiNb19-11
UNS S30400, S30403, S30453, S32100, S34700
AISI 347, 321,302, 304, 304L, 304LN

Typical analysis


	C	Si	Mn	Cr	Ni	Nb
wt.-%	0.03	0.8	0.8	19.5	10.0	0.32

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 energy ISO-V KV J	
	MPa	MPa	%	20°C	-120°C
u	480 (≥ 350)	620 (≥ 550)	40 (≥ 25)	70	35 (≥ 32)

u untreated, as-welded

Operating data

	Polarity	DC+ / AC	Dimension mm	Current A
	Electrode identification	FOX SAS 2-A 347-17 E 19 9 Nb R		
			1.5 × 250	25 – 40
			2.0 × 300	40 – 60
			2.5 × 350	50 – 90
			3.2 × 350	80 – 120
			4.0 × 350/450	110 – 160
			5.0 × 450	140 – 200

Suggested heat input is max. 1.5 kJ/mm and interpass temperature max. 150°C.

Generally no heat treatment needed.

BÖHLER FOX SAS 2-A can be used for cladding, which normally requires stress relieving at approximately 590°C. Such a heat treatment will lower the ductility at room temperature. BÖHLER FOX E 347 H may be an alternative in this case.

Re-drying if necessary at 250 – 300°C for min. 2 h.

Approvals

TÜV (01105), DB (30.014.06), ABS, DNV, CWB certified CSA W48-18: E347-17, CE