

Classifications

EN ISO 3581-A	AWS A5.4 / SFA-5.4
E 19 9 L R 3 2	E308L-17

Characteristics and typical fields of application

Rutile coated, core wire alloyed electrode of E 19 9 L R / E308L-17 type for all position welding of 1.4301, 1.4307 / 304L stainless steels. Resulting weld microstructure is austenite with 5 – 10% ferrite. Very good corrosion resistance under fairly severe conditions, e.g. in oxidizing acids and cold or dilute reducing acids. Max. service temperature 350°C.

Base materials

1.4301 X5CrNi18-10, 1.4306 X2CrNi19-11, 1.4307 X2CrNi18-9, 1.4311 X2CrNi18-9, 1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5CrNiNb18-10, 1.4550 X6CrNiNb18-10
UNS S30400, S30403, S30453, S32100, S34700
AISI 304, 304L, 304LN, 302, 321, 347

Typical analysis


	C	Si	Mn	Cr	Ni
wt.-%	0.025	0.7	0.7	19.7	10

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

Condition	Yield strength	Tensile strength R_m	Elongation A	Impact energy ISO-V KV J			Hardness
	$R_{p0.2}$	MPa	($L_0=5d_0$)	20°C	-120°C	-196°C	
u	420 (≥ 320)	570 (≥ 510)	45 (≥ 25)	70	40	34 (≥ 32)	200

u untreated, as-welded

Operating data

	Polarity	DC+ / AC	Dimension mm	Current A
	Electrode identification	308L-17/MVR	1.5 × 250	25 – 40
			2.0 × 300	40 – 60
			2.5 × 350	50 – 90
			3.2 × 350	80 – 120
			4.0 × 450	110 – 160
			5.0 × 450	140 – 200

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

Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1050°C followed by water quenching.

Redrying if necessary at 250 – 300°C for min. 2 h.

Approvals

TÜV (01064), DB (30.014.17), DNV, CE