

## Classifications

<b>EN ISO 3581-A</b>	<b>AWS A5.4 / SFA-5.4</b>
E Z 19 13 4 N L	E317L-17

## Characteristics and typical fields of application

Rutile coated, core wire alloyed electrode of E Z 19 13 4 N L R / E317L-17 type with high Mo-content. Suited for welding corrosion resistant CrNiMo(N)-steels such as 1.4438 and 1.4439 / 317L and corrosion resistant claddings on mild steels. It fulfills the high demands of offshore fabricators, shipyards building chemical tankers as well as the chemical / petrochemical and pulp & paper industries. Higher corrosion resistance than 1.4404 / 316L in acid and chloride containing solutions. Scaling temperature approximately 850°C in air.

## Base materials

1.4429 X2CrNiMoN17-13-3, 1.4434 X2CrNiMoN18-12-4, 1.4435 X2CrNiMo18-14-3, 1.4438 X2CrNiMo19-14-4, 1.4439 X2CrNiMoN17-13-5  
 AISI 316L, 316LN, 317L, 317LN, 317LMN  
 UNS S31600, S31653, S31703, S31726, S31753

## Typical analysis


	C	Si	Mn	Cr	Ni	Mo	FN
wt.-%	0.02	0.7	0.9	19.0	13.6	3.6	4 – 10

## 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
u	495	630 ( $\geq 520$ )	35 ( $\geq 30$ )	45 ( $\geq 32$ )

u untreated, as-welded

## Operating data

	Polarity	DC+ / AC	Dimension mm	Current A
	Electrode identification	317L-17/SNR	2.5 × 300	45 – 80
			3.2 × 350	70 – 120
			4.0 × 350	90 – 160
			5.0 × 350	150 – 220

Suggested heat input is max. 1.5 kJ/mm, interpass temperature max. 100°C.

Preheating and post-weld heat-treatment not necessary. In special cases, solution annealing can be performed at 1050°C followed by water quenching.

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

Metal recovery approximately 110%.

## Approvals

DNV, CE