

Classifications

EN ISO 3581-A	AWS A5.4	Mat. No.
E 19 12 3 L R 3 2	E316L-17	1.4430

Characteristics and typical fields of application

Stainless; resistant to intercrystalline corrosion and wet corrosion up to 400 °C (752 °). Corrosion resistant similar to matching low carbon and stabilized austenitic 18/8 CrNiMo steels / cast steel grades.

For joining and surfacing applications with matching/similar – non stabilized and stabilized – austenitic CrNi(N) and CrNiMo(N) steels / cast steel grades.

Base materials

TÜV certified parent metals

1.4429 – X2CrNiMoN17-13-3; 1.4583 – X10CrNiMoNb18-12; S31653; AISI 316L, 316Ti, 316Cb

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

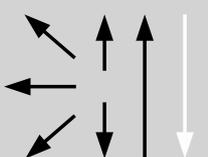
	C	Si	Mn	Cr	Mo	Ni
wt-%	< 0.04	< 0.9	0.8	19.0	2.8	12.5

Structure: Austenite with part ferrite

Mechanical properties of all-weld metal

Heat-treatment	Yield strength R _{p0.2}	Yield strength R _{p1.0}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J	
	MPa	MPa	MPa	%	+20 °C	-105 °C
aw	320	350	550	35	60	40

Operating data

	Polarity: DC (+) / AC	ø (mm)	L mm	Amps A
		2.0	300	40 – 60
		2.5	300	50 – 90
		2.5	350	50 – 90
		3.2	350	80 – 120
		4.0	350	110 – 160
		5.0	450	140 – 200

Welding instruction

Materials	Preheating	Postweld heat treatment
Matching and similar non stabilized and stabilized steels / cast steel grades	Keine	Mostly none. If necessary, solution annealing at 1050 °C (1922 °F) – pay attention to susceptibility to embrittlement

Approvals

TÜV (01314), DB (30.132.14), GL, LR, CE