Thermanit GE Spezial

Stick electrode, high-alloyed, stainless, basic

Classifications

EN ISO 3581-A	AWS A5.4	Mat. No.
E 19 12 3 L B 2 2	E316L-15	1.4430

Characteristics and typical fields of application

Stainless; resistant to intercrystalline corrosion and wet corrosion up to 400 °C (752 °F). 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. Well suited for out of position welding.

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.-%)

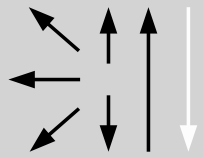
	C	Si	Mn	Cr	Mo	Ni
wt-%	< 0.04	0.2	1.3	18.5	2.8	11.5

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	70	40

Operating data



Polarity:	ø (mm)	L mm	Amps A
DC (+)	2.5	300	50 – 80
	3.2	350	80 – 110
	4.0	350	110 – 140

Welding instruction

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

Approvals

TÜV (06521), DW, CE