Thermanit GEW 316L-17

Rutile covered electrode

Classifications

EN 1600	AWS A 5.4	Mat. No.
E 19 12 3 L R 3 2	E316L-17	1.4430

Characteristics and field of use

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.

Materials

TÜV certified parent metals
X10CrNiMoNb18-12 (1.4583) X2CrNiMoN17-13-3 (1.4429)
S31653; AISI 316L, 316Ti, 316Cb

Typical analysis in %

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

Mechanical properties of the weld metal according to EN 1597-1
(min. values at RT)

Heat-treatment	Yield strength 0.2% N/mm²	Yield strength 1.0% N/mm²	Tensile strength N/mm²	Elongation (L_0=5d_0) %	Impact values in J CVN
AW	350	380	580	35	60 (+20 °C) 40 (–105 °C)

Structure

Austenite with part ferrite

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

Welding position

Polarity = + / ~

Approvals

TÜV (Certificate No. 0484) DB (Reg. form No. 30.132.14)
GL Controlas
LRS CWB

Packaging, weights and amperages

Dimensions (mm)	pcs./pack	kg/pack	Amperage A
2.0 x 300	340	3.8	40- 60
2.5 x 350	220	4.5	50- 90
3.2 x 350	130	4.4	80-120
4.0 x 350	90	4.6	110-160
5.0 x 450	60	5.9	140-200