



# 316L/SKR

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
4436	1.4436	316	316S33	Z7 CND 18-12-03	2343
4432	1.4432	316L	316S13	Z3 CND 17-12-03	2353
4429	1.4429	S31653	316S63	Z3 CND 17-12 Az	2375
4571	1.4571	316Ti	320S31	Z6 CNDT 17-12	2350

## Standard designations

EN 1600 E 19 12 3 L R  
AWS A5.4 E316L-17

## Characteristics

AVESTA 3D 316L/SKR is an all position Cr-Ni-Mo electrode for welding ASTM 316 and 316L stainless steels.

## Welding data

DC+ or AC	Diam. mm	Current, A
	1.6	25 – 50
	2.0	30 – 60
	2.5	45 – 80
	3.25	70 – 120
	4.0	90 – 160
	5.0	150 – 220

## Weld deposit data at maximum welding current

Electrode diam. length mm mm					Metal recov. ~ %
	N	B	H	T	
1.6 250	0.52	278	0.60	22	109
2.0 300	0.58	143	0.77	32	106
2.5 350	0.57	76	1.06	44	108
3.25 350	0.58	45	1.54	51	107
4.0 450	0.60	23	2.22	71	107
5.0 450	0.64	15	3.28	74	104

## Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo
0.02	0.8	0.7	18.5	12.0	2.7

Ferrite 10 FN DeLong

## Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength $R_{p0.2}$	445 N/mm <sup>2</sup>	320 N/mm <sup>2</sup>
Tensile strength $R_m$	590 N/mm <sup>2</sup>	510 N/mm <sup>2</sup>
Elongation $A_5$	36 %	25 %
Impact strength KV		
+20°C	55 J	
-40°C	55 J	
Hardness approx.	210 Brinell	

**Interpass temperature:** Max. 150°C.

**Heat input:** Max. 2.0 kJ/mm.

**Heat treatment:** Generally none (in special cases quench annealing at 1050°C).

**Structure:** Austenite with 5 – 10% ferrite.

**Scaling temperature:** Approx. 850°C (air).

**Corrosion resistance:** Excellent resistance to general, pitting and intercrystalline corrosion in chloride containing environments. Intended for severe conditions, e.g. in dilute hot acids.

## Approvals

- CE
- DB
- DNV
- TÜV

## Welding positions

