

Classifications

high-alloyed

EN ISO 14343-A:

AWS A5.9:

W 19 12 3 L Si

ER316LSi

Characteristics and field of use

Avesta 316L-Si/SKR-Si is designed for welding austenitic stainless steel type 17 Cr 12 Ni 2.5 Mo or similar. The filler metal is also suitable for welding titanium and niobium stabilised steels such as ASTM 316Ti in cases where the construction is used at temperatures not exceeding 400°C. For higher temperatures a niobium stabilised consumable such as Avesta 318-Si/SK Nb-Si is required.

Corrosion resistance:

Excellent resistance to general, pitting and intergranular corrosion in chloride containing environments. Intended for severe service conditions, e.g. in dilute hot acids.

Base materials

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

Typical composition of welding rod (Wt-%)

C	Si	Mn	Cr	Ni	Mo
0.02	0.85	1.7	18.5	12.0	2.6

Ferrite 6 FN;WRC-92

Mechanical properties of all-weld metal

Heat Treatment	Yield strength 0.2%	Tensile strength	Elongation ($L_0=5d_0$)	Impact values in J CVN
	MPa	MPa	%	+20°C:
untreated	450	600	31	140

Operating data



Polarity = -

Shielding gas:

Ar (99.95%) or Ar with an addition of 20 – 30% helium (He) or 1 – 5% hydrogen (H₂). The addition of helium (He) and hydrogen (H₂) will increase the energy of the arc. Gas flow rate 4 – 8 l/min.

Dimensions (mm)

1.0	1.2	1.6	2.0	2.4	3.2	4.0
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