Avesta 308L-Si/MVR-Si

TIG rod, high-alloyed, high corrosion resistant

Classification

EN ISO 14343-A	AWS A5.9
W 19 9 L Si	ER308LSi

Characteristics and typical fields of application

Avesta 308L-Si/MVR-Si is designed for welding austenitic-stainless steel type 19 Cr 10 Ni or similar. The wire can also be used for welding titanium and niobium stabilized steels such as ASTM 321 and ASTM 347 in cases where the construction is used at temperatures not exceeding 400 °C. For higher temperatures a niobium stabilized consumable such as Avesta 347-Si/MVNb-Si is required.

Structure: Austenite with 5 – 10 % Ferrite.

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

Corrosion resistance:

Corresponding to ASTM 304, i.e. fairly good under severe conditions such as oxidizing and cold dilute reducing acids.

Base materials

Outokumpu	EN	ASTM	BS	NF	SS
4301	1.4301	304	304S31	Z7 CN 18-09	2333
4307	1.4307	304L	304S11	Z3 CN 18-10	2352
4311	1.4311	304LN	304S61	Z3 CN 18-10 Az	2371
4541	1.4541	321	321S31	Z6 CNT 18-10	2337

Typical analysis of the solid wire (wt.-%)

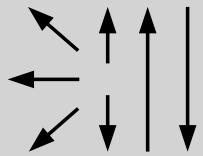
	C	Si	Mn	Cr	Ni	Ferrite
wt.-%	0.02	0.85	1.8	20.0	10.5	9 FN (WRC-92)

Mechanical properties of all-weld-metal

Heat treatment	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation (L_0=5d_0)	Impact work ISO-V KV J		Hardness
	MPa	MPa	%	+20 °C	-196 °C	Brinell
u	470	640	34	140	80	200

u untreated, as welded – Shielding gas Ar (99.95 %)

Operating data



Polarity	Shielding gas:	ø (mm)
DC (+)	Ar (99.95 %) Ar + 20 – 30 % He Ar + 1 – 5 % H_2 Gas flow rate: 4 – 8 l/min.	1.2 1.6 2.0 2.4 3.2

Heat treatment: Generally none (in special cases quench annealing at 1050 °C). Interpass temperature: max. 150°C. Heat input: max. 2.0 kJ/mm.

Approvals

CE, DB, DNV, TÜV