Avesta 347/MVNb

TIG rod, high-alloyed, high corrosion resistant

Classification

EN ISO 14343-A	AWS A5.9
W 19 9 Nb	ER347

Characteristics and typical fields of application

Avesta 318/SKNb is used for welding titanium and niobium stabilized steel type 19 Cr 10 Ni Ti or similar, providing improved high temperature properties e.g. creep resistance, compared to low-carbon non-stabilized materials. 347/MVNb is therefore primarily used for applications where service temperatures exceed 400 °C. Avesta Welding also supplies a 347 type wire with high silicon content (0.85 %) named 247-Si/MVNb-Si. The higher silicon content will improve the fluidity of the melt pool slightly.

Structure: Austenite with 5 – 10 % ferrite.

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

Corrosion resistance:

347/MVNb is primarily intended for high temperature service or applications that should be heat treated. However, the corrosion resistance corresponds to 308H, i.e. good resistance to general corrosion.

Base materials

Outokumpu 4541, ASTM 321, 347, EN 1.4541, 1.4550

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

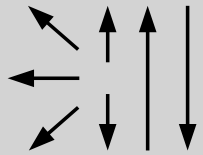
	C	Si	Mn	Cr	Ni	Nb	Ferrite
wt.-%	0.04	0.40	1.3	19.5	9.5	> 12xC	7 FN (WRC-92)

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	–40 °C	Brinell
u	520	680	33	110	100	210

u untreated, as welded – Shielding gas Ar (99.5 %)

Operating data



Polarity	Shielding gas:	ø (mm)
DC (+)	Ar 99.5 %	1.6
	Ar + 20 – 30 % He	2.0
	Ar + 1 – 5 % H_2	
	Gas flow rate: 4 – 8 l/min.	

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

TÜV, CE

All information provided is based upon careful investigation and intensive research.
However, we do not assume any liability for correctness and information is subject to change without notice.