

Classification

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 19 9 Nb P M21/C1 1	-	E347T1-4/-1

Characteristics and typical fields of application

Avesta FCW 347/MVNB-PW is a Nb-stabilised Cr-Ni flux-cored for positional welding of Nb or Ti stabilised steels, such as 1.4541/ASTM 321. A stabilised weldment has improved high temperature properties, e.g. creep resistance, compared to low-carbon non-stabilised grades. This wire is primarily used for applications with service temperatures above 400°C.

Avesta FCW 347/MVNB-PW provides excellent weld ability in all welding positions.

Welding using direct current positive polarity (DC+) with a recommended wire stick-out of 15 – 20 mm.

Corrosion resistance:

Primarily intended for high temperature service or applications that should be heat treated. However, the corrosion resistance corresponds to that of 308H. i.e. good resistance to general corrosion.

Base Materials

Outokumpu	EN	ASTM	BS	NF	SS
4541	1.4541	321	321S31	Z6 CNT 18-10	2337
-	1.4550	347	347S31	Z6 CNNb 18-10	2338

Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Ni	Nb
wt-%	0.03	0.7	1.4	19.0	10.4	>8xC

Mechanical properties of all-weld metal

Heat-treat-ment	Yield strength R _e N/mm ²	Tensile strength R _m N/mm ²	Elongation (L ₀ =5d ₀)	Impact work ISO-V KV J		Hardness
	MPa	MPa	%	+20 °C	-120 °C	HB
u	420	600	35	75	38	220

u untreated, as-welded – shielding gas Argon + 18 % CO₂

Operating data

	Polarity DC (+)	shielding gases: Ar + 15 – 25% CO ₂ 100 % CO ₂	re-drying if necessary: 150°C / 24 hrs	amps A 125 – 280	voltage V 20 – 34	ø (mm) 1.2
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Ar + 15 – 25% CO₂ offers the best weld ability, but 100% CO₂ can be also used (voltage should be increased by 2V). Gas flow rate 20 – 25 l/min.

Approvals

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