

# 347/MVNB basic

For welding steels such as 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

## Standard designations

EN 1600	E 19 9 Nb B
AWS A5.4	E347-15

## Characteristics

AVESTA 347/MVNB basic is a Nb-stabilised Cr-Ni electrode for welding Ti-stabilised steels such as ASTM 321 and 347 exposed to service temperatures exceeding 400°C. 347/MVNB basic provides better impact strength than the AC/DC type electrodes. Also used for the second layer (first layer 309 type) when cladding mild steel.

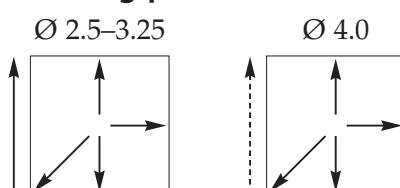
## Welding data

DC+	Diam. mm	Current, A
	2.5	50 – 70
	3.25	70 – 100
	4.0	100 – 140

## Weld deposit data

Metal recovery approx. 100%.

## Welding positions



## Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Nb
0.06	0.4	1.0	19.5	10.0	≥10xC

Ferrite 8 FN WRC-92

## Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength $R_{p0.2}$	520 N/mm <sup>2</sup>	350 N/mm <sup>2</sup>
Tensile strength $R_m$	680 N/mm <sup>2</sup>	550 N/mm <sup>2</sup>
Elongation $A_5$	30 %	25 %
Impact strength KV		
+20°C	90 J	
-40°C	65 J	
Hardness approx.	255 Brinell	

**Interpass temperature:** Max. 100°C.

**Heat input:** Max. 1.5 kJ/mm.

**Heat treatment:** Generally none. 347/MVNB can be used for cladding, which normally requires stress relieving at around 590°C. Such a heat treatment will lower the ductility at room temperature. Always consult expertise before performing post-weld heat treatment.

**Structure:** Approx. 90% austenite and 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 that of 308H, i.e. good resistance to general corrosion.

## Approvals

- CE
- TÜV