FCW 309L-PW

For welding steels such as							
Outokumpu	EN	ASTM	BS	NF	SS		
AVESTA 309L-PW	is primarily use	d for surfacing ur	alloved or l	ow-allov steels and wh	nen ioining		

non-molybdenum-alloyed stainless and carbon steels.

Standard designations

EN ISO 17633 T 23 12 L P M/C 1 AWS A5.22 E309LT1-4/-1

Characteristics and welding directions

AVESTA FCW 309L-PW is a high-alloy 23 Cr 13 Ni wire primarily intended for surfacing on low-alloy steels and for dissimilar welds between mild steel and stainless steels.

AVESTA FCW 309L-PW is designed for all-round welding and can be used in all positions without changing the parameter settings.

Welding data

Diameter	Welding position	Current	Voltage
mm		A	V
1.20	Flat, horizontal	150 – 240	24 – 32
	Vertical-up	130 – 160	23 – 28
	Overhead	150 – 200	24 – 29
	Vertical-down	120 – 180	22 – 27

Shielding gas

Ar + 15 – 25% CO₂ offers the best weldability, but 100% CO₂ can also be used (voltage should be increased by 2V). Gas flow rate 20 - 25 l/min.

Chemical composition, all weld metal (typical values, %)

С	Si	Mn	Cr	Ni	
0.03	0.6	1.5	23.0	12.8	
Ferrite	18 FN	WRC-	92		

Mechanical Typical Min. values properties values (IIW) EN ISO 17633 Yield strength R_{p0.2} 390 N/mm² 320 N/mm² Tensile strength R_m 550 N/mm² 510 N/mm² Elongation A₅ 35 % 25 % Impact strength KV +20°C 55 J Hardness 210 Brinell

Interpass temperature: Max. 150°C.

Heat input: Max. 2.0 kJ/mm.

Heat treatment: Generally none. For constructions that include low-alloy steels in mixed joints a stress-relieving annealing stage may be advisable. However, this type of alloy may be susceptible to embrittlement-inducing precipitation in the temperature range 500 – 950°C. Always consult the supplier of the parent metal or seek other expert advice to ensure that the correct heat treatment process is carried out.

Structure: Austenite with 5 – 10% ferrite.

Scaling temperature: Approx. 1000°C (air).

Corrosion resistance: Corrosion resistance superior to type 308L fillers. When surfacing on mild steel, a corrosion resistance equivalent to ASTM 304 is obtained from the first bead.

• TÜV

Approvals

- CWB GL
- DB RINA

