

P5 basic

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
Over-alloyed electrode for surfacing unalloyed steel, joint welding molybdenum-alloyed stainless steel to unalloyed steel and welding clad material.					

Standard designations

EN 1600	E 23 12 2 L B
AWS A5.4	E309MoL-15

Characteristics

AVESTA P5 basic is a highly alloyed low carbon electrode. It is designed for dissimilar welding between stainless and mild or low-alloy steels but can also be used for overlay welding, providing an 18 Cr 8 Ni 2 Mo type deposit from the very first layer. P5 basic provides a somewhat better impact strength than the 3D type electrodes.

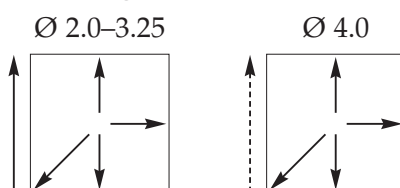
Welding data

DC+	Diam. mm	Current, A
	2.0	35 – 55
	2.5	50 – 75
	3.25	70 – 100
	4.0	100 – 140

Weld deposit data

Metal recovery approx. 105%.

Welding positions



Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo
0.03	0.2	2.0	22.5	13.0	2.7

Ferrite 15 FN DeLong

Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength $R_{p0.2}$	465 N/mm ²	350 N/mm ²
Tensile strength R_m	615 N/mm ²	550 N/mm ²
Elongation A_5	30 %	25 %
Impact strength KV		
+20°C	50 J	
-40°C	35 J	
Hardness approx.	230 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 participation in the temperature range 550 – 950°C.

Structure: Austenite with 15 – 20% ferrite.

Scaling temperature: Approx. 950°C (air).

Corrosion resistance: Superior to 316L. The corrosion resistance obtained in the first layer when surface welding corresponds to that of ASTM 316.

Approvals

- TÜV