

For welding steel such as:

Outokumpu	EN	ASTM	SS*	BS*	NF*
-	2.4856	N06625	-	-	-

Also for welding nickel base alloys to stainless or unalloyed steels and for surfacing.

* Obsolete national standards, replaced by EN 10088.

Characteristics

AVESTA P625 basic is a nickel base type electrode with a chemical composition corresponding to that of AWS A5.11 ENiCrMo-3.

The electrode, which is based on a fully alloyed core wire, has a weldability that in many respects is similar to that of rutile electrodes. Among other properties, it offers easy slag removal.

AVESTA P 625 basic is intended for welding the nickel base alloys 625 and 825.

Welding directions

When welding fully austenitic steels, care should be taken to avoid hot cracking. The heat input should be kept to a low level and the material should be allowed to cool to below 100°C before the next run is welded. Avoid igniting the electrode beside the weld and finish every bead with a circular movement to avoid pipes.

Weaving more than twice the core diameter is not recommended.

Weld deposit data at maximum welding current

Diam. mm	Length mm	N	B	H	T	Metal recovery, approx. %
2.5	300	0.64	88	0.99	42	106
3.25	350	0.66	44	1.38	59	105
4.0	350	0.68	29	1.97	63	106
5.0	350	0.72	19	3.20	61	104

Packaging data

Diam. mm	Length mm	Weight/ capsule, kg	Approx. No. of electrodes/ capsule	Weight/ carton, kg
2.5	300	1.80	99	10.80
3.25	350	4.10	118	12.30
4.0	350	4.54	90	13.62
5.0	350	5.00	67	15.00

Standard designations

EN 14172 E Ni Cr 22 Mo 9 Nb
AWS A5.11 ENiCrMo-3

Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	Nb	Fe
0.02	0.5	0.2	21.5	bal.	9.5	3.5	1.5

Ferrite 0 FN

Mechanical properties

	Typical values (IIW)	Min. values AWS A5.11
Yield strength, R _{p0.2}	460 N/mm ²	-
Tensile strength, R _m	775 N/mm ²	760 N/mm ²
Elongation, A ₅	30 %	30 %
Impact strength, KV +20°C	50 J	
Hardness approx.	220 Brinell	

Welding data

DC+ or AC	Diam., mm	Current, A
	2.5	40– 70
	3.25	60– 95
	4.0	90–135
	5.0	140–190

Interpass temperature: Max. 100°C.

Heat input: Max. 1.5 kJ/mm.

Heat treatment: Generally none. In special cases quench annealing at 1150–1200°C.

Structure: Fully austenitic.

Scaling temperature: Approx. 1100°C (air)

Corrosion resistance: Maximum resistance to pitting and crevice corrosion in chloride-containing environments. Good resistance in sulphuric and phosphoric acid contaminated by chlorides.

Approvals: -

Welding positions

