

For welding steel such as:

Outokumpu	EN	ASTM	SS*	BS*	NF*
4565	1.4565	S34565	–	–	–
254 SMO®	1.4547	S31254	–	–	–
654 SMO®	1.4652	S32654	–	–	–

* Obsolete national standards, replaced by EN 10088.

Characteristics

AVESTA P54 basic is an iron-based fully austenitic electrode designed for welding AvestaPolarit 254 SMO and 654 SMO and other similar 6Mo and 7Mo-steels.

AVESTA P54 was specially developed for applications exposed to highly oxidising chloride containing environments, such as D-stage bleachers in pulp mills where a nickel base filler would suffer from transpassive corrosion. P54 also offers very high resistance to localised corrosion.

Welding directions

AVESTA P54 produces a fully austenitic high alloy weld metal, which makes it somewhat more sensitive to hot cracking than, for example, 304-type steels.

To ensure optimum corrosion resistance and mechanical properties, the heat input should be kept at a low level. Welding should be performed using a short arc. High amperages should be avoided. Allow the weld to cool to below 100°C between successive passes.

Packaging data

Diam. mm	Length mm	Weight/ capsule, kg	Approx. No. of electrodes/ capsule	Weight/ carton, kg
3.25	350	4.10	110	12.30

Standard designations

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Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	Cu	N
0.02	0.2	2.6	25.7	25.5	4.9	0.8	0.35
Ferrite 0 FN							

Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength, R _{p0.2}	470 N/mm ²	– N/mm ²
Tensile strength, R _m	750 N/mm ²	– N/mm ²
Elongation, A ₅	22 %	– %
Impact strength, KV		
+20°C	50 J	
–40°C	30 J	
Hardness approx.	220 Brinell	

Welding data

DC+ or AC	Diam., mm	Current, A
	3.25	80–100

Interpass temperature: Max. 100°C.

Heat input: Max. 1.0 kJ/mm.

Heat treatment: Generally none.

Structure: Fully austenitic.

Scaling temperature: Approx. 1100°C (air)

Corrosion resistance: Superior resistance in near neutral chloride dioxide containing environments, such as D-stage bleachers.

Approvals: -

Welding positions

