

2507/P100

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
SAF 2507®	1.4410	S32750	–	Z3 CND 25-06 Az	2328

Standard designations

EN ISO 14343 S 25 9 4 L N

AWS A5.9 ER2594

Characteristics and welding directions

AVESTA 2507/P100 is intended for welding super duplex alloys, e.g. SAF 2507, ASTM S32750, S32760, S32550 and S31260.

AVESTA 2507/P100 provides a ferritic-austenitic weldment that combines many of the good properties of both ferritic and austenitic stainless steels.

Welding data

Diameter, mm	Current, A	Voltage, V
2.40	300 – 400	29 – 33
3.20	350 – 500	29 – 33

Welding flux: AVESTA Flux 805 or 807.

Corrosion resistance: Excellent resistance to pitting and stress corrosion cracking in chloride containing environments. Pitting resistance in accordance with ASTM G48-A, better than 40°C.

Approvals

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Chemical composition, wire (typical values, %)

C	Si	Mn	Cr	Ni	Mo	N
0.02	0.35	0.4	25.0	9.5	4.0	0.25

Ferrite 50 FN WRC-92

Chemical composition, all weld metal (typical values in combination with flux, %)

Flux	C	Si	Mn	Cr	Ni	Mo	FN ¹⁾
805	0.02	0.5	0.3	25.5	9.0	4.0	50
807	0.02	0.4	0.4	25.0	9.0	4.0	45

¹⁾ According to WRC-92

Mechanical properties

Typical values (IIW) in combination with flux

	805	807
Yield strength $R_{p0.2}$	650 N/mm ²	630 N/mm ²
Tensile strength R_m	870 N/mm ²	830 N/mm ²
Elongation A_5	26 %	25 %
Impact strength KV +20°C	80 J	80 J

Interpass temperature: Max. 100°C.

Heat input: Max. 1.5 kJ/mm.

Heat treatment: Generally none (in special cases quench annealing at 1100 – 1150°C).

Structure: Austenite with 45 – 55% ferrite.

Scaling temperature: Approx. 850°C (air).