

# Avesta 2507/P100 rutile

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

## Standard designations

EN ISO 3581-A E 25 9 4 N L R  
AWS A5.4 E2594-16

## Characteristics

Avesta 2507/P100 rutile is designed for welding super duplex steels such as 2507/1.4410.

The weldability of duplex and super duplex steels is excellent, but the welding should be adapted to the base material, considering fluidity, joint design, heat input etc. For detailed welding recommendations, please see "How to weld duplex stainless steels" or contact voestalpine Böhler Welding.

## Welding data

DC+ or AC	Diam, mm	Current, A
	2.5	50 – 70
	3.25	80 – 100
	4.0	100 – 140

## Weld deposit data at maximum welding current

Electrode diam, length mm mm						Metal recov. ~ %
N	B	H	T			
2.5	300	0.58	93	0.77	50	107
3.25	350	0.64	46	1.30	59	108
4.0	350	0.68	30	1.88	64	110

## Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	N
0.03	0.5	1.3	25.2	9.5	3.6	0.23

Ferrite 45 FN WRC-92

## Mechanical properties

	Typical values (IIW)	Min. values EN ISO 3581
Yield strength $R_{p0.2}$	700 N/mm <sup>2</sup>	550 N/mm <sup>2</sup>
Tensile strength $R_m$	900 N/mm <sup>2</sup>	620 N/mm <sup>2</sup>
Elongation $A_5$	26 %	25 %
Impact toughness KV		
+20°C	80 J	
-46°C	45 J	
Hardness approx.	250 Brinell	

**Interpass temperature:** Max. 100°C.

**Heat input:** 0.3 – 1.5 kJ/mm.

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

**Structure:** Duplex (austenite with 30 – 50% ferrite).

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

**Corrosion resistance:** Excellent resistance to pitting, crevice and stress corrosion cracking in chloride containing environments. PREN >40. Meets the corrosion test requirements per ASTM G48 Methods A, B, E (40°C).

## Welding positions

