

2304

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
2304	1.4362	S32304	–	Z3 CN 23-04 Az	2327

Standard designations

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Characteristics and welding directions

AVESTA 2304 is primarily designed for welding the duplex steel SAF 2304 and similar grades.

AVESTA 2304 provides a ferritic-austenitic weldment that combines many of the good properties of both ferritic and austenitic stainless steels.

AVESTA 2304 has a low content of molybdenum, which makes it well suited for nitric acid environments.

Welding data

Diameter, mm	Current, A	Voltage, V
3.20	400 – 600	29 – 34

Welding flux: AVESTA Flux 805.

Corrosion resistance: Very good resistance to pitting and stress corrosion cracking in nitric acid environments.

Approvals

In combination with flux
805 • CE • TÜV

Chemical composition, wire (typical values, %)

C	Si	Mn	Cr	Ni	Mo	N
0.02	0.40	0.5	23.0	7.0	< 0.5	0.14

Ferrite 40 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	0.6	0.4	23.5	6.5	< 0.5	40

¹⁾ According to WRC-92.

Mechanical properties

Typical values (IIW) in combination
with flux 805

Yield strength $R_{p0,2}$	480 N/mm ²
Tensile strength R_m	650 N/mm ²
Elongation A_5	25 %
Impact strength KV +20°C	100 J
Hardness	260 Brinell

Interpass temperature: Max. 150°C.

Heat input: 0.5 – 2.5 kJ/mm.

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

Structure: Austenite with 35 – 55% ferrite.

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