

For welding steel such as:

Outokumpu	EN	ASTM	SS*	BS*	NF*
SAF 2304®	1.4362	S32304	2327	-	-

* Obsolete national standards, replaced by EN 10088.

Characteristics

AVESTA 2304 AC/DC has a rutile-acid type coating which provides very good weldability when working with both positive pole DC and AC.

AVESTA 2304 electrodes are primarily designed for welding Outokumpu SAF 2304 and other corresponding steel grades.

Welding directions

Outokumpu SAF 2304 should be welded as an ordinary austenitic stainless steel, i.e. high amperages should be avoided and the material should be allowed to cool to below 150°C between passes.

AVESTA 2304 should be welded with a short arc or with its coating sliding along the workpiece. Direct current (+pole) is preferable. Optimum results are achieved using an amperage in the upper part of the amperage range given, i.e. somewhat higher than the amperage generally used for other electrode types. It is often advantageous to tack weld with a somewhat larger gap than that used when welding with rutile and basic electrodes, thus ensuring good penetration

Weld deposit data

Metal recovery approx 110 %.

Packaging data

Diam. mm	Length mm	Weight/capsule, kg	Approx. No. of electrodes/capsule	Weight/carton, kg
2.5	350	4.10	179	12.30
3.25	350	4.10	109	12.30
4.0	400	4.90	78	14.70

Standard designations

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Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	N
0.02	0.8	0.8	24.5	9.0	0.12
Ferrite		30 FN WRC-92			

Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength, R _{p0.2}	640 N/mm ²	- N/mm ²
Tensile strength, R _m	780 N/mm ²	- N/mm ²
Elongation, A ₅	23 %	- %
Impact strength, KV		
+20°C	40 J	
-40°C	25 J	
Hardness approx.	260 Brinell	

Welding data

DC+ or AC	Diam., mm	Current, A
	2.5	50- 80
	3.25	80-120
	4.0	100-160

Interpass temperature: Max. 150°C.

Heat input: 0.5 - 2.0 kJ/mm.

Heat treatment: Generally none. In special cases quench annealing at 1050°C.

Structure: Austenite with approx. 30 % ferrite.

Scaling temperature: Approx. 850°C (air)

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

Approvals: TÜV

Welding positions

