

For welding steel such as:

Outokumpu	EN	ASTM	SS*	BS*	NF*
253 MA®	1.4835	S30815	2368	–	–
153 MA™	1.4818	S30415	2372	–	–

\* Obsolete national standards, replaced by EN 10088.

#### Characteristics

AVESTA 253 MA-NF AC/DC has a rutile-acid coating, which provides excellent welding properties when using either DC (+ pole) or AC.

AVESTA 253 MA-NF produces a fully austenitic weld metal with a stable microstructure and very good impact strength values even when exposed to temperatures between 750 and 950°C. Another very important aspect is the very good creep properties.

AVESTA 253 MA-NF is used for welding the high-temperature steels AvestaPolarit 153 MA and 253 MA and other austenitic stainless steels designed for use at elevated temperatures.

#### Welding directions

AVESTA 253 MA-NF should be welded using a short arc. To avoid the production of large weld pools, the appropriate amperage and welding speed should be chosen. Excessive weaving should be avoided. The material should, if possible, be allowed to cool to temperatures below 100°C between subsequent passes.

#### Weld deposit data at maximum welding current

Diam. mm	Length mm	N	B	H	T	Metal recovery, approx. %
2.50	300	0.58	78	0.80	58	109
3.25	350	0.58	46	1.18	66	108
4.00	350	0.62	27	1.63	82	105

#### Packaging data

Diam. mm	Length mm	Weight/ capsule, kg	Approx. No. of electrodes/ capsule	Weight/ carton, kg
2.5	300	1.90	118	11.40
3.25	350	4.10	109	12.30
4.0	350	4.10	72	12.30

#### Standard designations

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#### Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	N
0.08	0.7	1.0	19.0	10.0	0.16
Ferrite 0 FN					

#### Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength, R <sub>p0.2</sub>	470 N/mm <sup>2</sup>	– N/mm <sup>2</sup>
Tensile strength, R <sub>m</sub>	630 N/mm <sup>2</sup>	– N/mm <sup>2</sup>
Elongation, A <sub>5</sub>	35 %	– %
Impact strength, KV +20°C	60 J	
Hardness approx.	210 Brinell	

#### Welding data

DC+ or AC	Diam., mm	Current, A
	2.5	45– 70
	3.25	70–110
	4.0	100–140

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

**Heat input:** Max. 1.5 kJ/mm.

**Heat treatment:** Generally none.

**Structure:** Fully austenitic.

**Scaling temperature:** Approx. 1000°C (air)

**Corrosion resistance:** Excellent resistance to high temperature corrosion. Not intended for applications exposed to wet corrosion.

**Approvals:** –

#### Welding positions

Ø 2.5-3.25

Ø 4.0

