

## Classification

EN ISO 14343-A	AWS A5.9
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## Characteristics and typical fields of application

Avesta 253 MA is designed for welding the high temperature steel Outokumpu 253 MA, used for example in furnaces, combustion chambers, burners etc. Both the steel and the consumable provide excellent properties at temperatures 850 – 1100 °C. The composition of the consumable is balanced to ensure crack resistant weld metal. 253 MA has a tendency to give a thick oxide layer during welding and hot rolling. Black plates and previous weld beats should be carefully brushed or ground prior to welding.

Structure: Austenit mit 3 bis 10 % Ferrit.

Zunderbildung: ca. 1150 °C (Air).

### Corrosion resistance:

Excellence resistance to high temperature corrosion. Not intended for applications exposed to wet corrosion.

## Base materials

Outokumpu	EN	ASTM	BS	NF	SS
153 MA™	1.4818	S30415	-	-	2372
263 MA®	1.4835	S30815	-	-	2368

## Typical analysis of the solid wire (wt.-%)

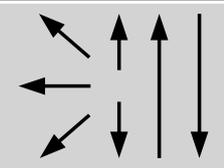
	C	Si	Mn	Cr	Ni	N	Ferrite
wt.-%	0.07	1.6	0.6	21.0	10.0	0.15	2 FN (WRC-92)

## Mechanical properties of all-weld-metal

Heat treatment	Yield strength R <sub>p0.2</sub>	Tensile strength R <sub>m</sub>	Elongation (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J	Hardness
	MPa	MPa	%	+20 °C	Brinell
u	520	720	32	140	210

u untreated, as welded – Shielding gas Ar (99.95 %)

## Operating data

	<b>Polarity</b> DC ( + )	<b>Shielding gas:</b> Ar (99.95 %) Gas flow rate 4 – 8 l/min	<b>ø (mm)</b>
			1.6
			2.0
			2.4
			3.2

Preheating and Heat treatment are generally not necessary. Interpass temperature: Max. 150 °C.  
Heat input: max. 1.5 kJ/mm.

## Approvals

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