



# FCW-2D 307

For welding steels such as  
Outokumpu

EN

ASTM

BS

NF

SS

Over-alloyed flux cored wire for welding stainless steel to mild steel, low-alloyed steel or Mn-steel.

## Standard designations

EN ISO 17633 T 18 8 Mn R M/C 3

## Characteristics and welding directions

AVESTA FCW-2D 307 is an over-alloyed fully austenitic consumable for welding stainless steel to mild, low-alloyed or Mn-steels. It is also suitable for welding some 14% Mn steels and other difficult-to-weld steels.

AVESTA FCW-2D 307 has high deposition rates, it operates with a very stable arc, produces smooth weld bead surfaces with self-releasing slag. The weld metal is purely austenitic, but still very resistant to hot cracking.

AVESTA FCW-2D 307 provides excellent weldability in flat as well as horizontal-vertical position.

## Welding data

Diameter mm	Welding position	Current A	Voltage V
1.20	Flat, horizontal	170 – 280	25 – 31
	Horizontal-vertical	150 – 210	23 – 29

## Shielding gas

Ar + 15 – 25% CO<sub>2</sub> offers the best weldability, but 100% CO<sub>2</sub> can also be used (voltage should be increased by 2V).

Gas flow rate 20 – 25 l/min.

## Chemical composition, all weld metal (typical values, %)

C	Si	Mn	Cr	Ni
0.10	0.75	6.5	18.8	9.0
Ferrite	0 FN	DeLong		

## Mechanical properties

	Typical values (IIW)	Min. values EN ISO 17633
Yield strength R <sub>p0,2</sub>	405 N/mm <sup>2</sup>	350 N/mm <sup>2</sup>
Tensile strength R <sub>m</sub>	600 N/mm <sup>2</sup>	500 N/mm <sup>2</sup>
Elongation A <sub>5</sub>	36 %	25 %
Impact strength KV		
+20°C	56 J	
-60°C	44 J	
Hardness	200 Brinell	

**Interpass temperature:** Max. 150°C.

**Heat input:** 2.0 kJ/mm.

**Heat treatment:** Generally none.

For constructions that include low-alloyed steels in mixed joints, a stress-relieving annealing stage may be advisable. Always consult the supplier of the parent metal or seek other expert advice to ensure that the correct heat treatment process is carried out.

**Structure:** Fully austenitic.

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

**Corrosion resistance:** Primarily intended for stainless to mild steel connections, however, the corrosion resistance corresponds to that of ASTM 304.

## Approvals

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