

Classification

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 23 12 2 L R M/C3	-	E309LMoT0-4/-1

Characteristics and typical fields of application

Avesta FCW-2D P5 is a molybdenum alloyed wire of the 309MoL type, primarily designed for welding dissimilar joints between stainless steels and low-alloy steels. It can also be used for overlay welding, providing an 18 Cr 8 Ni 2 Mo deposit from the first layer.

Avesta FCW-2D P5 provides excellent weldability in flat as well as horizontal-vertical position. Welding in vertical-up and overhead positions is preferably done using FCW P5-PW.

Avesta FCW-2D P5 should be welded using direct current positive polarity (DC+) with a recommended wire stick-out of 15-20 mm.

Corrosion resistance:

Superior to type 316L fillers. When used for overlay welding on mild steel a corrosion resistance equivalent to that of 1.4401/316 is obtained already in the first layer.

Base Materials

Outokumpu	EN	ASTM	BS	NF	SS
-----------	----	------	----	----	----

Avesta P5 is primarily used when surfacing unalloyed or low-alloy steels and when joining molybdenum-alloyed stainless and carbon steels.

Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Ni	Mo
wt-%	0.025	0.7	1.4	22.9	12.6	2.7

Mechanical properties of all-weld metal

Heat-treatment	Yield strength R_e N/mm ²	Tensile strength R_m N/mm ²	Elongation ($L_0=5d_0$)	Impact work ISO-V KV J	Hardness
	MPa	MPa	%	+20 °C	HB
u	500	700	30	55	220

u untreated, as-welded – shielding gas Argon + 18 % CO₂

Operating data

	Polarity DC (+)	shielding gases: Ar + 15 – 25% CO ₂ 100 % CO ₂	re-drying if necessary: 150°C / 24 hrs	amps A 125 – 280 200 - 350	voltage V 20 – 34 25 - 35	ø (mm) 1.2 1.6
---	---------------------------	---	--	---	--	-----------------------------

Ar + 15 – 25% CO₂ offers the best weldability, but 100% CO₂ can be also used (voltage should be increased by 2V). Gas flow rate 20 – 25 l/min.

Approvals

-