

## Classification

EN ISO 17633-A	EN ISO 12153-B	AWS A5.22
T 23 12 2 L P M / C 1	-	E309LMoT1-4/-1

## Characteristics and typical fields of application

Avesta FCW P5-PW 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 very first layer.

Avesta FCW P5-PW has a stronger arc and a faster freezing slag compared to the 2D type. It is designed for all-round welding and can be used in all positions without changing the parameter settings.

Avesta FCW P5-PW 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

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-%	0.024	0.47	1.4	22.6	12.2	2.6

## Mechanical properties of all-weld metal

Heat-treatment	Yield strength R <sub>e</sub> N/mm <sup>2</sup>	Tensile strength R <sub>m</sub> N/mm <sup>2</sup>	Elongation (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J			Hardness
				+20 °C	-40 °C	-196°C	
	MPa	MPa	%				HB
u	470	660	29	55	-	-	220

u untreated, as-welded – shielding gas Argon + 18 % CO<sub>2</sub>

## Operating data

	Polarity DC (+)	shielding gases: Ar + 15 – 25% CO <sub>2</sub> 100 % CO <sub>2</sub>	re-drying if necessary: 150°C / 24 hrs	amps A	voltage V	ø (mm) 1.2
				150 – 240	24 – 32	
				130 – 160	23 – 28	
				150 – 200	24 – 29	
				120 – 180	22 – 27	

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

## Approvals

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