

Classification

EN ISO 14343	AWS A5.9
G 23 12 2 L	ER309LMo (mod.)

Characteristics and typical fields of application

Avesta P5 is a Mo-alloyed wire, type 309LMo for dissimilar joints of un-alloyed and stainless steels and for cladding on low-alloyed steels. The all-weld-metal ensures a high resistance against cracking and is also suitable for welding of high strength steels. When used for surfacing the composition is more or less equal to that of ASTM 316 from the first run.

Corrosion resistance:

Comparable but slightly better than 316L

Structure: Austenit with 5 – 10 % Ferrit

Scaling temperature: 950 °C (air)

Base materials

Suitable for dissimilar joints of un- or low-alloyed steels with stainless steels as well as for cladding on low-alloyed steels.

Typical analysis of solid wire (wt.-%)

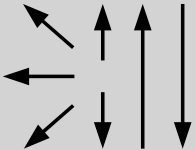
	C	Si	Mn	Cr	Ni	Mo	Ferrit
wt.-%	0.02	0.35	1.5	21.5	15.0	2.7	8 FN (WRC-92)

Mechanical properties of all-weld metal

Heat treatment	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J		Hardness
	MPa	MPa	%	+20 °C	-40 °C	Brinell
u	390	610	31	75	60	210

u untreated, Shielding gas Ar + 2 % O₂

Operating data

	Polarity	Shielding gas	ø (mm)
	DC (+)	Ar + 2 % O ₂ or	0.8
		Ar + 2 – 3 % CO ₂	1.0
		Gas flow rate 12 – 16 l	1.2

Preheating and heat treatment: In general none. For joints with low-alloyed steels stress relieved annealing is recommended in some cases. Please take care about the embrittlement of the base material in detail!

Interpass temperature max. 150°C

Heat input max. 2.0 kJ/mm

Approvals

TÜV, DB, DNV, CE