

## Classification

EN ISO 14343	AWS A5.9
S 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 the wire and of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Ni	Mo	Ferrit
Wire	0.02	0.35	1.5	21.5	15.0	2.7	9 FN (DeLong)
Flux 801	0.02	0.8	0.8	22.0	14.5	2.7	14 FN (DeLong)
Flux 805	0.02	0.6	1.0	22.0	15.0	2.7	15 FN (DeLong)

## Mechanical properties of all-weld metal

Heat treatment	Yield strength R <sub>p0.2</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
u, Flux 801	470	620	31	50
u, Flux 805	410	600	35	70

u untreated

## Operating data

	Polarity DC ( + )	Re-drying of the flux: 300 – 350 °C / min. 2 h	ø (mm)
			2.4
			3.2
			4.0

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