



# merian®

## Avesta 317L/SNR

TIG rod, high-alloyed, high corrosion resistant

Classification	
EN ISO 14343-A	AWS A5.9
W 19 13 4 L	ER317L

**Characteristics and typical fields of application**

Avesta 317L/SNR is designed for welding type 18 Cr 14 Ni 3 Mo austenitic stainless steels and similar. The enhanced content of chromium, nickel and molybdenum compared to 316L gives improved corrosion properties in acid chloride containing environments.

Structure: Austenite with 5 – 10 % ferrite.

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

**Corrosion resistance:**

Better resistance to general, pitting and intercrystalline corrosion in chloride containing environments than ASTM 316L. Intended for severe service conditions, i.e. in dilute hot acids.

Base materials					
Outokumpu	EN	ASTM	BS	NF	SS
4438	1.4438	317L	317S12	Z3 CND 19-15-04	2367
4439	1.4439	317LMN	-	Z3 CND 18-14-05 Az	-

Typical analysis of the solid wire (wt.-%)							
	C	Si	Mn	Cr	Ni	Mo	Ferrite
wt.-%	0.02	0.4	1.7	19.0	13.5	3.5	9 FN (WRC-92)

Mechanical properties of all-weld-metal					
Heat treatment	Yield strength R <sub>p0.2</sub>	Tensile strength R <sub>m</sub>	Elongation (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J	Hardness
	MPa	MPa	%	+20 °C	Brinell
u	440	630	28	100	200
u untreated, as welded – Shielding gas Ar + 1 – 5 % H <sub>2</sub>					

Operating data			
	<b>Polarity</b> DC ( + )	<b>Shielding gas:</b> Ar (99.95 %) Ar + 1 – 5 % H <sub>2</sub> Ar + 20 – 30 % He Gas flow rate: 4 – 8 l/min	<b>ø (mm)</b> 2.4

Heat treatment: Generally none (in special cases quench annealing at 1050 °C).

Interpass temperature: Max. 100 °C.

Heat input: Max. 1.5 kJ/mm.

Approvals
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