

## Classification

EN ISO 14343-A	AWS A5.9
G 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.-%)

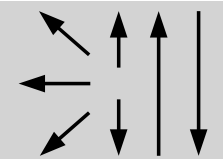
	C	Si	Mn	Cr	Ni	Mo	Ferrite
wt.-%	0.02	0.4	1.7	19.0	13.5	3.5	9 FN (WRC-92)

## 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	420	630	31	85	200

u untreated, as welded – Shielding gas Ar + 2 – 3 % CO<sub>2</sub>

## Operating data

	Polarity DC ( + )	Shielding gas: Ar + 2 % O <sub>2</sub> Ar + 2 – 3 % CO <sub>2</sub> Gas flow rate: 12 – 16 l/min	ø (mm) 1.0 1.2
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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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