

Classification		
EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 23 12 L P M21 1	TS 309L-F M21 1	E309LT1-4
T 23 12 L P C1 1	TS 309L-F C1 1	E309LT1-1

## Characteristics and typical fields of application

Avesta FCW 309L-PW is a high-alloyed flux cored wire, primarily intended for surfacing low-alloy steels and for dissimilar welds between mild steel and stainless steels.

It is designed for all-round welding and can be used in all positions without changing the parameter settings.

### Corrosion resistance:

When used for overlay welding on mild steel a corrosion resistance equivalent to that of 1.4301/304 is obtained already in the first layer.

## Base Materials

Dissimilar joint welds: of and between high-strength, mild steels and low-alloyed QT-steels, stainless, ferritic Cr- and austenitic Cr-Ni- steels, manganese steels

Surfacing: for the first layer of corrosion resistant weld surfacing on ferritic- perlitic steels in boiler and pressure vessel parts up to fine-grained steel S500N, as well as of high temperature steels like 22NiMoCr4-7, 20MnMoNi5-5 and G18NiMoCr3-7

## Typical analysis of all-weld metal (wt.-%)

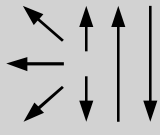
	C	Si	Mn	Cr	Ni
wt.-%	0.03	0.7	1.4	23.0	12.5

## Mechanical properties of all-weld metal

Condition	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	-60°C	HB
u	<b>400</b>	<b>540</b>	<b>35</b>	<b>65</b>	<b>50</b>	<b>210</b>

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

## Operating data

	Polarity: DC ( + )	Shielding gases:	Redrying:	Amps A	Voltage V	ø (mm)
		Argon + 15 – 25% CO <sub>2</sub>	if necessary 150°C / 24 h	100 – 160	21 – 28	0.9
				100 – 220	20 – 31	1.2
		100 % CO <sub>2</sub>		175 – 260	21 – 29	1.6

Welding with standard GMAW power source possible, preferably slightly trailing torch position (angle appr. 80°), slight weaving is recommended for all welding positions; when using 100 % CO<sub>2</sub> as shielding gas it is necessary to increase the voltage by 2 V. Stick out 15-20mm; The gas flow should be 15 – 18 l / min. Preheat and interpass temperatures as required by the base metal.

## Approvals

TÜV(10739.), DB (43.014.42), CWB, DNV, GL, LR, RINA