

# Avesta FCW-2D 309L

Flux cored wire

## Classifications

high-alloyed rutile

EN ISO 17633-A:

AWS A5.22:

T 23 12 L R M21 3 ; T 23 12 L R C1 3

E309LT0-4 ; E309LT0-1

## Characteristics and field of use

Avesta FCW-2D 309L is a high-alloy wire, primarily intended for surfacing low-alloy steels and for dissimilar welds between mild steel and stainless steels. It can also be used for welding some high temperature steels, such as 1.4833/ASTM 309S. Avesta FCW-2D 309L provides excellent weldability in flat as well as horizontal/vertical position. Welding in vertical-up and overhead positions is preferably done using FCW 309L-PW. FCW-2D 309L diam. 0.9 mm can be welded in all positions. Avesta FCW-2D 309L should be welded using direct current positive polarity (DC+) with a recommended wire stick-out of 15 – 20 mm.

### Corrosion resistance

Superior to type 308L fillers. 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. Ferrite 15 FN; WRC-92

## Base materials

For welding steels such as					
Outokumpu	EN	ASTM	BS	NF	SS
Avesta 309L is primarily used for surfacing unalloyed or low-alloy steels and when joining non-molybdenum-alloyed stainless and carbon steels.					


## Typical composition of all-weld metal (Wt-%)

C	Si	Mn	Cr	Ni
0.025	0.7	1.4	22.8	12.5

## Mechanical properties of all-weld metal

Heat Treatment	Yield strength 0.2%	Tensile strength	Elongation ( $L_0=5d_0$ )	Impact values in J CVN	
	MPa	MPa	%	+20°C:	-60°C:
untreated	400	540	35	60	45

## Operating data

	Polarity = +	Shielding gas: Ar + 15 – 25% CO <sub>2</sub> offers the best weldability, but 100% CO <sub>2</sub> can also be used (voltage should be increased by 2V). Gas flow rate 20–25 l/min.
---	--------------	---

Dimensions (mm)	Amperage A
0.9	100-160
1.2	125-280
1.6	200-350