

Avesta FCW-2D 309L AG

Flux cored wire, high-alloyed, special applications

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 23 12 L R C1 (M21) 3	TS309L-FB0	E309LT0-1 E309LT0-4

Characteristics and typical fields of application

Rutile flux-cored welding wire for GMAW of dissimilar joints of Cr- and CrNi(Mo)-steels and non- or low-alloy steels, as well as weld cladding of un- or low alloyed base metals preferably in flat or horizontal position. This product achieves high productivity and is easy to operate achieving excellent welding characteristics, self releasing slag, almost no spatter formation and temper discolouration, smooth weld finish and safe penetration. Beside the major savings in time and cost BÖHLER Welding offers a high production guality level together with lowest probabilities for welding errors. Increased travel speeds as well as little demand for cleaning and pickling provide considerable savings in time and money. Suitable for service temperatures of -60 °C to +300 °C.

Wires with ø 1.2 mm can be used for wall thicknesses from 3 mm and up. Wire ø1,2 mm and ø1,6 mm are recommended mainly for downhand and horizontal welding positions. FN 11 – 15 (calculated WRC-92, 100 % CO₂).

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 acc. to SEW- Werkstoffblatt 365, 366, 20MnMoNi5-5 and G18NiMoCr3-7

Typical analysis of all-weld metal (wt%)								
	С	Si	Mn		Cr		Ni	
wt-%	0.03	0.75	1.4		22.8		12.4	
Mechanical properties of all-weld metal								
Heat- treatment	Yield strength R _{p0.2}	Tensile strer R _m	igth	Elongation A $(L_0=5d_0)$	ongation Impact w (L ₀ =5d ₀) ISO-V K		ork / J	
	MPa	MPa		%		+20 °C		−60 °C
u	400 (≥ 320)	540 (≥ 510)		35 (≥ 30)		≥ 47		≥ 32
u untreated, as welded – (Argon + 15 – 25 % CO ₂ ; 100 % CO ₂)								
Operating data								

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	Polarity:	Shielding	Redrying if	ø (mm)	Amps A	Voltage V
	DC (+)	gases: M1 – M3; C1	necessary: 150 °C / 24 h	1.2 1.6	120 – 280 200 – 350	21 – 36 25 – 37
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Welding with standard GMAW-facilities possible, slightly trailing torch position (angel appr. 80°), when using Argon + $15 - 25 \% CO_2$ as shielding gas it is necessary to decrease the voltage by 2 V; the gas flow should be 15-18 l/min. Preheat and interpass temperatures as required by the base metal.

Approvals