

Classifications

EN ISO 14343-A	EN ISO 14343-B	AWS A5.9
G 23 12 L	SS309L	ER309L

Characteristics and typical fields of application

Solid wire of type 309L / 23 12 L for welding dissimilar joints with an average ferrite content 16 FN. Well suited for depositing intermediate layers when welding clad materials. Due to the high ferrite content, the weld metal is less susceptible to hot cracking. Suitable for service temperatures between -80°C and 300°C.

Base materials

Dissimilar Joints of and between high-strength, mild steels and low-alloyed QT-steels, stainless, ferritic Cr and austenitic Cr-Ni-steels, high 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.

Typical analysis of solid wire

	C	Si	Mn	Cr	Ni
wt-%	≤ 0.02	0.5	1.7	24.0	13.2

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact values ISO-V CVN J
	MPa	MPa	%	-80 °C
u	420 (≥ 320)	570 (≥ 520)	32 (≥ 25)	(≥ 32)

u untreated, as welded – shielding gas Ar + 2.5 % CO₂

Operating data

	Polarity: DC +	Shielding gas: (EN ISO 14175) M12, M13	Ø mm	Spool: BS300 Drum: BASEdrum ECOdrum
			0.8	
			1.0	
			1.2	
1.6				

Approvals

TÜV (09362), DNV GL, ABS, BV, CE