

Classifications

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

Characteristics and typical fields of application

GTAW rod of type W 23 12 L / ER309L. This is a standard alloy for welding dissimilar joints with an average ferrite content 16 FN.

BÖHLER CN 23/12-IG is designed for very good welding and wetting characteristics as well as good safety after dilution when welding dissimilar joints. Suitable for service temperatures between -120 °C and +300 °C.

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

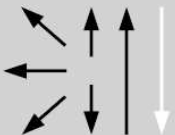
Typical analysis of the TIG rods (wt.-%)

	C	Si	Mn	Cr	Ni
wt-%	≤ 0.02	0.5	1.7	23.5	13.2

Mechanical properties of all-weld metal

Condition	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	-120 °C
u	440 (≥ 320)	580 (≥ 520)	34 (≥ 25)	150	≥ 32
u untreated, as welded – shielding gas Argon					

Operating data

	Polarity:	Shielding gas:	Rod marking:	ø (mm)
	DC (-)	100 % Argon	front: ⚡ W 23 12 L back: ER 309 L	1.6
				2.0
				2.4
				3.2

Preheat and interpass temperature as required by the base metal.

Approvals

TÜV (4699.), GL (4332), SEPPOZ, CE, DB (43.014.29)