

Classifications

EN ISO 14343-A	EN ISO 14343-B	AWS A5.9
W 23 12 2 L	SSZ309LMo	ER309LMo (mod.)

Characteristics and typical fields of application

GTAW rod of type W 23 12 2 L / ER309LMo (mod.) for surfacing low-alloy steels and welding dissimilar joints between duplex and stainless steels with low-alloy steels. When used for surfacing the composition is more or less equal to that of ASTM 316 from the first run.

BÖHLER CN 23/12 Mo-IG is designed for very good welding and wetting characteristics and ensuring a high resistance against cracking. Suitable for service temperatures between -40 °C and $+300\text{ °C}$.

Base materials

Dissimilar joint welds of and between high-strength, mild steels and low-alloyed QT-steels, with duplex, stainless, ferritic Cr- and austenitic Cr-Ni-Mo 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.-%)

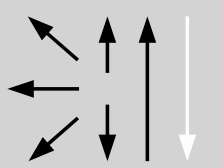
	C	Si	Mn	Cr	Ni	Mo		Ferrite WRC-92
wt-%	0.014	0.35	1.5	21.5	15.0	2.7		8

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	-40 °C
u	470 (≥ 350)	640 (≥ 550)	34 (≥ 25)	140 (≥ 47)	90 (≥ 32)

u untreated, as-welded – shielding gas Argon

Operating data

	Polarity: DC (-)	Shielding gases: 100 % Argon Ar + 20 – 30 % He	Rod marking: front: ✦ 1.4459	∅ (mm) 1.6 2.0 2.4
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Preheating and interpass temperature as required by the base metal and should not exceed 150 °C .

Approvals

TÜV (10990.), CE