

Classifications

AWS A5.9 / SFA-5.9	EN ISO 14343-A
ER308L	W 19 9 L

Characteristics and typical fields of application

TIG rod of type ER308L / W 19 9 L is for joining and surfacing applications with matching and similar stabilized and unstabilized austenitic CrNi(N) and CrNiMo(N)-steels and cast steel grades. Corrosion resistance similar to matching low-carbon and stabilized austenitic 18/8 CrNi(N)-steels. Excellent weld metal toughness down to -320°F Application temperature max. 650°F.

Base materials

1.4301 X5CrNi18-10, 1.4306 X2CrNi19-11, 1.4307 X2CrNi18-9, 1.4311 X2CrNi18-9, 1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5CrNiNb18-10, 1.4550 X6CrNiNb18-10
UNS S30400, S30403, S30453, S32100, S34700
AISI 304, 304L, 304LN, 302, 321, 347

Typical analysis

	C	Si	Mn	Cr	Ni
wt.-%	≤ 0.02	0.5	1.8	20	10.0

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 energy ISO-V KV J	
	ksi	ksi	%	68°F	-452°F
u	58 (≥ 46)	80 (≥ 74)	38 (≥ 30)	111 (≥ 74)	55 (≥ 24)
u untreated, as-welded – shielding gas Ar					

Operating data

	Polarity	DC -	Dimension inch	Current A	Voltage V
	Shielding gas (EN ISO 14175)	I1 (Ar)	0.035" × 39"	50 – 70	9 – 11
	Rod marking	+ W 19 9L / ER308L	0.045" × 39"	60 – 80	9 – 11
			1/16" × 39"	80 – 120	10 – 13
			5/64" × 39"	100 – 130	14 – 16
			3/32" × 39"	130 – 160	16 – 18

Approvals

TÜV (09451), DB (43.13.19), DNV, ABS, CE
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