

## Classifications

<b>EN ISO 14343-A</b>	<b>AWS A5.9 / SFA-5.9</b>
G 19 9 L Si	ER308LSi

## Characteristics and typical fields of application

Solid wire of G 19 9 L Si / ER308LSi type 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 18Cr8Ni(N)-steels. The wire shows very good wetting and feeding characteristics, with excellent weld metal toughness down to  $-196^{\circ}\text{C}$ . Application temperature max.  $350^{\circ}\text{C}$ .

## Base materials

1.4306 X2CrNi19-11, 1.4301 X5CrNi18-10, 1.4311 X2CrNiN18-10, 1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5CrNiNb18-10, 1.4550 X6CrNiNb18-10  
AISI 304, 304L, 304LN, 302, 321, 347

## Typical analysis

	C	Si	Mn	Cr	Ni
wt.-%	$\leq 0.02$	0.8	1.7	20	10.2

## 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 work ISO-V KV J	
	MPa	MPa	%	$20^{\circ}\text{C}$	$-196^{\circ}\text{C}$
u	390 ( $\geq 320$ )	540 ( $\geq 510$ )	38 ( $\geq 25$ )	110	46 ( $\geq 32$ )

u untreated, as-welded – shielding gas Ar + 2.5% CO<sub>2</sub>

## Operating data



Dimension mm	Current A	Voltage V
0.8 short arc	90 – 120	18 – 22
1.0 short arc	110 – 140	19 – 22
1.0 spray arc	160 – 220	25 – 29
1.2 spray arc	200 – 270	26 – 30
1.6 spray arc	250 – 330	27 – 32

Suggested heat input is max. 2.0 kJ/mm and interpass temperature max.  $150^{\circ}\text{C}$ .

Shielding gas: Ar + 2 – 3 % CO<sub>2</sub> or Ar + 1 – 2 % O<sub>2</sub>. Gas flow: 12 – 16 l/min.

Polarity: DC+

## Welding instructions

Preheating / Interpass temperature	Materials	Post weld heat treatment (PWHT)
None	Matching and similar non-stabilized and stabilized austenitic CrNi(N) steels / cast steel grades	Mostly none. If necessary, solution annealing at $1000^{\circ}\text{C}$
None	Cryogenic austenitic steels / cast steel grades	None

## Approvals

TÜV (04164), DB (42.132.28), DNV GL, CE