

### Description

SFA 308LSI is an extra low carbon 20 Cr / 9 Ni stainless steel filler wire suitable for MIG welding of austenitic stainless steels such as 18 Cr / 8 Ni type, AISI 301, 302, 304, 304L, 308 and 308L type of steels. Excellent corrosion resistance and good mechanical properties. Ferrite is controlled between 5-10%. Si~0.80 content improves weldability and bead appearance. SFA 308LSI is used for welding of 304 and 304L grade stainless steel. The weld metal provides good corrosion resistance to intergranular attack from a range of liquid media. It is used for a wide range of applications including pipe work and plate fabrication, vessel production etc. The low carbon reduces the propensity to intergranular carbide precipitation, which increases the resistance to intergranular corrosion without the use of stabilizers. The increased silicon content results in increased weld pool fluidity to give a smooth deposit appearance. This all – position, quality MIG wire is ideally suited for joining common austenitic stainless steel grades referred to as “18-8” steels. It is specially processed to provide superior feeding and arc stability.

Precision layer winding technologies ensure smooth, virtually trouble-free feeding.

Typical applications includes welding of austenitic stainless steels like AISI 301, 302, 304, 304L, 308 and 308L type generally used in food processing and chemical industries, as well as for pipes, tubes, boilers. esistance.

### Materials to be welded

Steel Grades	EN 10088-1/-2	EN 102 13-4	W.Nr.	ASTM /ACI	
				A240/A312/A351	UNS
Extra low carbon (C <0.03%)	X2CrNi19 11		1.4306	(TP)304 L CF-3	S30403 J92500
	X2CrNiN18 10		1.4311	(TP)304 LN 302, 304	S30453 S30400
Medium carbon (C >0.03%)	X4CrNi18 10	GX5CrNi19 10	1.4301 1.4308	(TP)304 CF-8	S30409 J92600
Ti-, Nb stabilized	X6CrNiTi18 10		1.4541	(TP)321 (TP)321H	S32100 S32109
	X6 CrNiNb 18 10	GX5 CrNiNb 19 10	1.4550 1.4552	(TP)347 CF-8C	S34700 J92710

### Classification

AWS A 5.9 : ER 308LSi

EN ISO 14343 : G 19 9 LSi

### Typical weld metal chemical composition (%)

C	Mn	Si	Cr	Ni	Mo	Cu	S	P
0.03 max	1.60-2.50	0.65-1.00	19.50-22.00	9.00-11.00	0.75 max.	0.75 max.	0.03 max.	0.03 max.

### All weld metal mechanical properties (typical)

Yield Strength (N/mm <sup>2</sup> )	Tensile Strength (N/mm <sup>2</sup> )	Elongation A5 (%)	Impact energy ISO-V(J)
≥350	≥520	≥35%	≥60

The chemistry and all weld mechanical properties will vary with the type of shielding gas used. Recommended shielding gas is 98% Ar + 2% O<sub>2</sub> or Ar + 2 – 3% Co<sub>2</sub>.

### Welding directions

MIG welding can be performed as short, spray or pulsed arc. Short arc is preferably used for thin gauges, both for horizontal and positional welding. Spray arc increases the deposition rate. Welding with pulsed arc gives excellent possibilities for a good result in varying plate thicknesses in all positions. The highest flexibility using pulsed arc is achieved with 1.20 mm.

### Corrosion resistance

Corresponding to SFA308LSi, i.e. fairly good under severe conditions such as oxidising and cold dilute reducing acids.

### Current conditions

DC (+)

### Storage

Keep dry and avoid condensation

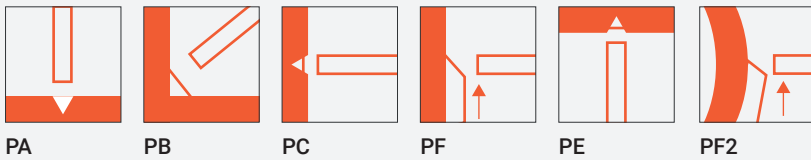
### Recommended welding data

Operating range		Diameter (mm)		
		0.8	1.0	1.2
Ar+1~2%CO <sub>2</sub>	Amp	40~120	80~160	100~210
	Volt	15~20	16~22	17~22
Ar+1~2%O <sub>2</sub>	Amp	160~210	180~280	200~300
	Volt	24~28	24~30	24~30

### Packing data

Size (mm)	0.60	0.80	0.90	1.00	1.10	1.20	1.60
Weight (kg)	12.50/15.00	12.50/15.00	12.50/15.00	12.50/15.00	12.50/15.00	12.50/15.00	12.50/15.00

### Welding positions



PA

PB

PC

PF

PE

PF2