

INERTFIL 309LSi is a G 23 12 LSi/ER 309LSi type solid MAG welding wire, supplied precision layer wound, depositing a low C-23Cr12Ni weld metal. Suitable for use with Ar+2%O<sub>2</sub> or Ar+0.5...5%CO<sub>2</sub> mixed shielding gases.

INERTFIL 309LSi is used for the welding of stainless steels to mild and medium tensile steels. It is used for depositing intermediate layers on steel prior to depositing 308 grade stainless steel. Also used for the welding of clad steels where service temperatures are below 300°C.

The weld metal has a delta-ferrite content of ~12% resulting in a high resistance to hot cracking. The increased silicon content results in increased weld pool fluidity to give a smooth deposit appearance.

Solid wire for welding 25% CR and 12% Ni steels with low carbon content. The silicon content makes for excellent weldability.

Classification	
EN ISO	14343-A: G 23 12 L Si
AWS	A5.9: ER 309LSi

Approvals	Grade
DB	●
TÜV	●

### Chemical analysis (Typical values in %)

	C	Mn	Si	P	S	Cr	Ni
Wire	0.020	1.8	0.85	≤ 0.025	≤ 0.020	24	13

### All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				+20 °C	-120 °C
As Welded	≥350	≥520	≥30	≥ 100	≥32


Gas test: 98% Ar+2% CO<sub>2</sub>

**Shielding Gas** - EN ISO 14175 : M12, M13

### Materials

A312 TP309S; carbon steel to stainless steels joint

Storage
Keep dry and avoid condensation

Current condition and welding position
DC+


### Packaging data

Packaging Type	BS300
Diam(mm) / weight(kg)	15
0.8	W000283093
1.0	W000283094
1.2	W000283095