

INERTROD 309L is a W 23 12 L/ER 309L type solid TIG welding rod depositing a low C-23Cr 12Ni weld metal. Suitable for use mainly with Ar shielding gas.

INERTROD 309L is used for the welding of stainless steels to mild and medium tensile steels. It is ideal for depositing intermediate layers on structural steel prior to depositing 308 grade stainless steel. Also used for the welding of clad steels where service temperatures <300°C.

The weld metal has a delta-ferrite content of ~12% resulting in good resistance to hot cracking.

Classification		Approvals	Grade
EN ISO	14343-A: W 23 12L	TÜV	●
AWS	A5.9: ER 309L	CE	

### Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Ferrite
0.02	1.8	0.45	≤ 0.025	≤ 0.020	24	13	10-20

### All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				+20 °C	-80 °C
As Welded	≥ 350	≥ 520	≥ 30	≥ 47	≥ 32

Gas test: 100% Ar

**Shielding Gas** - EN ISO 14175 : I1

### Materials

Carbon steel to stainless steel joints,  
Ferrite-Austenite heterogeneous joints ("Black-White"),  
A312 TP309S;  
Corrosion resistance surfacing

### Storage

Keep dry and avoid condensation

### Current condition and welding position

DC-



### Packaging data

Diam. (mm)	Packaging Type	Weight (kg)	Code
1.0	TUB	5	●
1.2	TUB	5	●
1.6	TUB	5	●
2.0	TUB	5	●
2.4	TUB	5	●
3.2	TUB	5	●