



CHG-309L/ER309L Stainless Steel TIG Rod

AWS A5.9 ER309L

BS EN ISO 14343-A-W (23 12 L)

BS EN ISO 14343-B-SS309L

JIS Z3321 Y309L

GB/T 4241 H03Cr24Ni13Si

Welding Position: F, H, HF, OH, V

Type of Current: DCEP

Features & Applications

CHG-309L is an extra-low carbon stainless steel TIG rod and its weld metal has excellent performance of resistance to intercrystalline corrosion. It is suitable for welding structures of petrochemical industry or synthetic fibre industry that fabricated by similar extra-low carbon stainless steels, ply steels and dissimilar steels. Also it can be used for surfacing lining intermediate layer of pressure vessels of nuclear reactor.

Chemical Composition of the Wire (%)

	C	Mn	Si	S	P	Ni	Cr	Mo	Cu
Standard	≤0.03	1.0-2.5	0.30-0.65	≤0.03	≤0.03	12.0-14.0	23.5-25.0	≤0.75	≤0.75
Typical	0.026	2.11	0.38	0.008	0.017	12.31	23.56	0.006	0.05

Mechanical properties of Deposited Metal (AW)

	Tensile Strength Rm (MPa)	Elongation A4 (%)	Shield Gas
			98%Ar+2%O ₂
Standard	≥520	≥30	Purity ≥99.99%
Typical	570	38	

Notice:

- 1) Keeping the package of the wire in good condition before welding.
- 2) To avoid welding defect the shield gas should be pure particularly no moisture in it.
- 3) The surfaces to be welded must be cleaned away impurities of oil contamination, rust, moisture and so on.
- 4) The flow rate of the shield gas should be 9L-14L/minute when the current is 100A-120A and it should be 14L-18L/minute when the current is 200A-300A. The extension of tungsten electrode should be 3mm-5mm and arc length 1mm-3mm. wind speed ≤1.0m/s. It is better to fill shield gas on the backside of welded joint in welding.
- 5) Mechanical properties, crack resistance and appearance of the weld metal are affected by heat input in welding so should pay more attention to it.
- 6) The welding conditions mentioned above for reference only and it is better to do a welding procedure qualification according to project before put it into formal welding.